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## CONDUCT IN MEDICAL PRACTICE\*

B. J. GALLAGHER, M.D.

Waseca, Minnesota

PRECEDENT has decreed that the President of this society shall deliver a presidential address on the evening of the annual banquet. The honor of presiding over this society is one which is so deeply felt and so greatly appreciated that it is with a feeling of some trepidation that I attempt to walk in the footsteps of those fine men who have preceded me in this office.

But, unfortunately, presidential essayists can probably lay claim to being the original "forgotten men." Abraham Lincoln may have had presidential addresses in his subconscious mind when he said:

"The world will little know nor long remember what we say here."

In planning an address of any kind one must give some consideration to the question of how long it shall be. No speech is entirely bad if it retains the saving grace of brevity. I have decided that the optimum time is somewhere between ten minutes and half an hour. Even the lawyers have found that there is such a thing as talking too long and the limits which I have established have been founded in part on the experience of one of my brothers who is a lawyer. Some years ago he was appointed by the Judge to appear in court in defense of a prisoner who had entered a plea of guilty to the crime charged. My brother talked very earnestly before the Judge for ten minutes, recounting all the extenuating circumstances that he knew of and pleading for the clemency of the court. When he got through the Judge promptly said, "Ten years in State's Prison." My brother has always contended that if he had talked for half an hour instead of ten minutes, he would prob-

ably have gotten the prisoner a life sentence.

I shall try to stick closer to the ten minutes than the half hour, for if you are to be the judge and jury when I get through, I do not want the sentence to be more than ten years.

Speaking of lawyers, they like to tell stories on the doctors, especially if they have something to do with the matter of the doctor burying his mistakes. There is one burying story, however, which no lawyer ever thinks is funny, and that is about the two men who were walking in a cemetery, one day, when they came to a tombstone on which were engraved these words, "Here lies a lawyer and an honest man." One man turned to the other and said, "How did they happen to bury them both in the same grave?"

It would seem that since we are destined to live out our lives on this earth, if those lives are not to be entirely miserable, we must derive what we can of happiness as we go along. Even the laity agree that the doctor's life is a "dog's life," and yet I doubt if many of us would choose a different course if we had it all to do over again. If we do not expect the compensations to be entirely financial, they more than make up for the factors which so often contribute to our physical discomfort and our mental distress. But I think that, aside from the normal and ordinary things inherent in the work of the profession which make doctors more or less unhappy at times, many of us go out of our way to invite things which bring us nothing but needless unhappiness. Several years ago, after being in the maelstrom of general practice for five or six years, I was away for several months and then returned to practice again. Having in mind some of the things which one might call extra-

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curricular, which it seemed to me had contributed needlessly to my own discomfiture and to that of other doctors whom I knew, I wrote down a few postulates which I thought might serve to steer me clear of some of the reefs I had struck before. In looking them over, lately, I notice there are six—what might be called six beatitudes of conduct in medical practice. I have not always lived up to them, and I do not suppose anyone could; but if one did, I believe he would avoid some of the heartaches which we have all felt at times.

1. "Do not discuss your competitors with ANYBODY. It only leads to acrimony."

You know how anxious some people are to open up a discussion of this kind which involves criticism of your confreres and how easy it is, by word or by acquiescence, to chime in with it. When we do this we do ourselves and our profession no good and afterward we have that uncomfortable feeling that we have surrendered to expediency and thereby failed to live up to the best traditions of our calling. I think the sum total of our happiness in life will be greater if we make use of such occasions to come to a diplomatic defense of the profession as a whole, for we know only too well that the fortunes or misfortunes of medical practice are often regulated by factors over which we have very little control. The streptococcus is deadly, whether in our competitor's practice or in our own.

2. "Do not talk too much. Sarcastic remarks do no good and only cause a lot of sorrow."

They not only cause a lot of sorrow but they actually hurt our business. You know the old saying that politics make strange bedfellows and the man or the family who, today, may not seem to be our friends, in a few years from now, by some turn of the wheel of fortune, may prove to be the best of friends and patients. If we succumb to a natural inclination to be "uppish" with people who employ another doctor when we feel, for some reason or another, that they should have employed us, we not only make ourselves unnecessarily unhappy at the time but we may preclude the possibility of ever doing anything for these people in the future. We contend, in arguing against "state medicine," that people must be allowed "free choice of physician." We must then allow them that privilege freely our-

selves and not feel that we have any counterclaim on them because we may have done things for them in the past.

3. "Do not try too hard to explain reasons for everything."

I sometimes think of what people say in referring to some older physician who is dead and gone. They will say that he never said much but that he was a great doctor. He may really not have said much because he did not know much about the matter, but, at least, he knew enough not to try to explain the unexplainable—to "unscrew the unscrutable," as the negro preacher expressed it. I think, in our younger days especially, we often try to explain too much, the net result being further confusion and loss of confidence on the part of the patient and the family. We should oftener remember that we are master of the unspoken word. This is well expressed in one of the epistles of St. James, in which he says:

"We should be quick to hear but slow to speak."

I do not mean to imply that the Sphinx on the Nile would make a great doctor, for the practice of the art of medicine is based in great part on the skillful use of words; but the practice of the science of medicine is seldom, if ever, improved by recourse to verbosity.

4. "Make the job the main thing while on it and when the necessity for a change arrives, take a vacation away from town."

The doctors in any small town, practicing alone, as most of us here are, can testify that after a certain number of weeks the long, irregular hours tire our bodies and our nerves and it is then that we get jumpy and irritable and say and do things which do irreparable damage to our business. We try to escape doing certain things which we do not want to do. Someone has said that the "conquest of fate is in acquiescence to it and not in struggling against it," and if we are in general practice it is our fate that we must tend to our business while we are in town, unpleasant or uncomfortable as it may seem. If we think at that time that we cannot afford a vacation, I believe the truth of the matter is that we cannot afford not to take one. In industry the law limits the number of hours which men may work, in the interest of public safety. In medicine we work on indefi-

nately. I suppose the best solution of this problem is group practice, or even a partnership of two men where this can be done. This allows more time for periods of vacation which must, almost necessarily, be away from town and which can often be made to be periods of post-graduate instruction or observation. This will result in a better type of medical service to our patients but particularly, as is the theme of this discourse, will allow us to live a little as we go along instead of always putting it off to that future day when we think we can afford it—a day which may never come for many of us. Without enthusiasm our work becomes drudgery and it is hard to keep enthusiastic when we stay on the job too long at a time without the reviving stimulus of a rest and change of scenery.

5. **"Try to avoid hearing the mean things said about you and if heard anyway, try to forget them as soon as possible."**

You remember Kipling's words:

"If you can bear to hear the words you've spoken  
Twisted by knaves to make a trap for fools."

No man can expect to avoid being maligned by someone in the community and how much happier he will be if he never hears about it! In order to meet these situations we may need to develop a philosophy of life as expressed by a poet in these words:

"By thine own soul's law learn to live  
And if men hate thee, have no care  
And if men thwart thee, give no heed  
Sing thou thy song, and do thy deed."

6. **"Give every patient the best attention possible, then forget it until seen again."**

This can hardly be done literally for we need to study our cases, but we sometimes needlessly worry about cases between times and in our hearts we know that we have not given them the best attention possible.

I think another thing which tends to make us unhappy as we grow older is the realization of the fact that we have not accomplished as much in our lives as we had hoped to do. Psychologists tell us that we are born with varying abilities to accomplish. Under our constitution we are said to be created "free and equal" but we

know that in any business or profession it is only given to a few to scale the heights of fame and fortune. Perhaps it is just as well that this is so for much of life's work must be done in the valleys and in the lowlands. I do not believe that many wars would ever be won by an army consisting entirely of generals. Not many people in any one community will suffer because of the doctor's inability to diagnose or to cure a brain tumor. A great many more will suffer if the doctors of that community cannot handle their confinement cases intelligently, or cannot diagnose and treat the seven-year itch when they see it. If we could retain something more of the idea of service with which we entered the study of medicine—the idea that we are trying to do the best we can for people in distress—and if we could induce people to believe that we are doing this, then I think we would come closer to occupying the enviable position in the esteem of the public which the older doctors held. I think that in our concern about the purely economic and scientific features of our profession we are likely to forget that if we are, in truth, members of the last existing guild we have an obligation to be noble over and above that of the men and women of almost any other calling. In dealing with people who cannot well afford to pay much for our services, if we could be willing more often and more graciously to count as part of our compensation the knowledge that we have the power and the privilege "to cure sometimes, to relieve often, and to comfort always" then we would be less inclined to apply the yard stick of monetary income as the main measure of success. If we are performing a useful work in our community, and doing it to the best of our natural born ability to accomplish, we are achieving success, and we should not be too unhappy about it because we are not also acquiring fame.

In conclusion, may I quote the words of a very good friend of mine, who has said:

"He is happiest, most useful, and hence most successful who earliest finds out what his community needs; and, finding out these current needs, applies the most direct, economical and human methods to supply them."

## MANAGEMENT OF APPENDICITIS\*

E. A. REGNIER, M.D.

Minneapolis

SINCE it has been estimated that over eight hundred articles on appendicitis have been written in the past five years, the question immediately suggests itself—why write another one? The reason for the voluminous literature on this one subject is obviously that there is a great deal of confusion in the minds of the profession as to what is the best method of managing a disease which causes over twenty thousand deaths in the United States each year. Paradoxical as it may seem, the incidence of the disease is greatest in the earlier years of life, the second and third decades showing the greatest incidence. The mortality of appendicitis should not exceed 1 per cent if all cases were seen early in the course of the disease and operated immediately. Likewise the morbidity would be minimal. Upon reviewing the literature one is impressed with the numerous attempts that have been made to arrive at a more rational treatment for the complications of appendicitis. A few teaching institutions and many individual surgeons are now teaching the so-called conservative treatment of appendicitis complicated by peritonitis. Statistical study of the reports on mortality and morbidity from various clinics means very little because of conflicting terminology and variations in the description of the pathological processes.

The reasons for this high mortality in appendicitis may be summed up as follows:

1. The first and foremost is procrastination on the part of the patient in seeking medical aid early in the course of the disease.
2. Failure of the medical consultant to recognize the disease or of attempts at medical management.
3. The promiscuous use of purgatives by the patient in the hope of avoiding medical attention.
4. Coincident constitutional diseases, such as severe diabetes, nephritis and cardiac diseases.
5. Mismanagement of the case after the diagnosis has been made.

Since the notable treatise on appendicitis by Fitz<sup>1</sup> in 1886, the plea for appendicitis has always been for early diagnosis and early treatment. Fitz was the first to call attention to the fact that a diagnosis must be made early in the course of the disease and that to attain the best results the treatment must be carried out before complications arise. Still today, we find many cases unrecognized before complications set in. The diagnosis of appendicitis, particularly in children, is oftentimes difficult because a small child is not able to give an accurate history and an accurate description of the symptoms. A careful and detailed history is the greatest single factor in arriving at a diagnosis. Pain is the one and only unfailing symptom, being present in 100 per cent of the cases. Localized tenderness is almost as constantly present. Rigidity, vomiting, fever and leukocytosis vary with the progress and the intensity of the disease. Chills are not very common early in the disease and when they occur, usually signify gangrenous processes, usually accompanied by a fever of 101 or more and a relatively high leukocyte count.

There are times when tenderness and rigidity seem entirely too slight to be compatible with the patient's complaint. This situation often arises when the acutely inflamed appendix is retrocecal, retroperitoneal or over the pelvic brim and in the pelvis proper. A pelvic appendix can be diagnosed only by rectal examination. In other instances, rigidity and tenderness may seem all out of proportion to the duration of the complaint and usually signify a fulminating process in an obstructed appendix. One must be on guard in examining children lest some distant inflammatory process, such as pneumonia, simulate acute appendicitis. This is so common that we have a rule at the Minneapolis General Hospital that no child is operated unless an x-ray of his chest is first taken.

It has been our custom at the Minneapolis General Hospital to operate all cases of appendicitis as soon as the diagnosis is made unless the condition of the patient is such that a few hours of preoperative preparation are needed. This

\*Read before the annual meeting of the Minnesota State Medical Association, Rochester, Minnesota, May 4, 1936.



preparation means replenishing fluids by hypodermoclysis, intravenous glucose, blood transfusions and such measures as seem desirable to rehabilitate the patient sufficiently to warrant laparotomy. While there has been some variation in technic depending on the surgeon who is treating the case, the majority of patients are operated through a pararectus or right rectus incision. This type of incision is never chosen where an abscess only is to be drained. In cases where an abscess is to be drained, an incision is usually made directly over the abscess unless it be a cul-de-sac abscess, in which case, it is drained transrectally in the male or through the vagina in the female. It is our practice to always remove the appendix unless the patient's condition does not warrant more than drainage or unless the appendix is so inaccessible that attempts to remove it would add risk to the operation. The majority of the appendectomies have been done by the Senior Resident Surgeon, but the management of all cases is directed by the Staff. Acute and gangrenous appendicitis with local exudate over the surfaces of the appendix and surrounding structures have all had appendectomies without drainage. All cases with local abscesses or generalized peritonitis have had appendectomies, unless contraindicated as above mentioned, and have had drainage. Soft rubber drains are used, one drain being placed at the site of the appendix, one in the lateral gutter extending into the pelvis and the third placed lateral to the cecum extending toward the liver. The drains are shortened after the fifth day and usually removed by the eighth or ninth day. We feel that it is imperative that drains be lateral to the intestinal coils along the parietal peritoneum. Obviously, it is impossible to drain the peritoneal cavity in cases of generalized peritonitis, but by placing drains in the most dependent portions of the abdomen we have had very few secondary abscesses occur. The patient is then returned to bed and allowed to assume any position. We do not feel that the so-called Fowler position is an asset to drainage as this usually means placing the patient in a most uncomfortable position, whereby his vital capacity is greatly reduced because only the head and shoulders assume the Fowler position, the abdomen usually lying in a horizontal plane. All patients are given hypodermoclysis and intravenous glucose sufficient to give them an output of urine ap-

proximating a normal, which is between 800 and 1,200 c.c. per twenty-four hours. All patients are allowed fluids and food if they are not vomiting, including cases of peritonitis as well as clean cases. If a patient vomits unduly after the operation, the cause is usually due to ileus. Here one must make sure that there is no mechanical obstruction as this oversight usually means a fatality. Cases of ileus are treated by continuous siphonage of the stomach, sufficient morphine for comfort, and hot packs to the abdomen. Such patients are permitted to drink liquids by mouth if they so desire as this satisfies their thirst and tends to prevent parotitis and stomatitis often arising in very sick patients with limited oral hygiene.

In going over our records at the Minneapolis General Hospital we find that from 1926 to 1931 the mortality in 527 appendectomies was 7 per cent. In this group 226 were suppurative cases and in this group the mortality was 11.6 per cent. In 171 acute and gangrenous cases the mortality was 6.4 per cent. Of the seventy-six cases occurring in children, twenty-four were acute with a mortality of 12.5 per cent; forty-seven suppurative cases with a mortality of 12.7 per cent. This makes a total mortality of appendicitis in children of 11.7 per cent for that five year period. In the years 1932 to 1935 inclusive, there were 749 cases of appendicitis treated at the Minneapolis General Hospital with a mortality of 6.3 per cent. These figures are slightly higher than many reported in the literature, but they compare very favorably with the average throughout the country. It is noted that in the five years previous to 1931 there was a total of 527 cases as compared to 749 cases in the four year period. This is an average increase of ninety cases per year in the last four years.

In order to get a further insight into the morbidity and mortality of these cases, a statistical study of 306 cases treated in the years 1934 and 1935 was made. Two hundred and fifty-eight cases were classified as acute, gangrenous and suppurative with a mortality of 6.5 per cent. There were twelve abscesses with a mortality of 8.5 per cent. There were forty-nine cases of spreading peritonitis with a mortality of 20 per cent. The total mortality of the entire group was 6 per cent. The incidence of the disease was approximately the same in males as in females. In the suppurative groups, the ratio

of males to females was 3 to 1. Seventy per cent of the cases were under thirty years of age.

In order to further study the percentage of morbidity and mortality in patients with diffuse spreading peritonitis, 106 consecutive cases of this type were studied. These cases were treated in 1932, 1933 and 1934. The average age of these 106 patients was 25.2 years. Forty-eight of these had had cathartics. The average number of days of illness before coming to the hospital was 3.8 days. The average stay in the hospital was 21.6 days. There were twenty-two deaths among the 106 patients, or a mortality of 21 per cent. This is practically the same mortality as the series for the years 1934 and 1935.

I chose only the cases of generalized peritonitis because it was impossible to segregate cases of local peritonitis and cases of abscess. These two types of cases had been indexed interchangeably; hence, it would simply be confusing to try to segregate the two groups. It is significant that the mortality of appendicitis at the Minneapolis General Hospital over a ten year period has averaged between 6 and 7 per cent. In the five years previous to 1931 the mortality for the acute, gangrenous and peritonitis cases combined was 11.6 per cent. This figure has likewise remained practically the same during the last five years. In spite of the fact that the number of cases have practically doubled in the last five years and that there have been 25 per cent more cases of generalized peritonitis, the mortality shows a slight decrease during the last five year period.

In reviewing the history of the treatment of appendicitis, we find cycles of change in therapy. Beginning with the epoch-making paper by Reginald Fitz in 1886 in which he recommended the early operation of appendicitis; continuing on through writings of such men as Fenger,<sup>8</sup> Senn,<sup>14</sup> John B. Murphy<sup>9</sup> and many others, the plea has always been for early operation. However, as early as 1902 Ochsner<sup>11</sup> published his first paper advocating deferred treatment in appendicitis complicated by peritonitis. The next great exponent of this form of treatment was Sherren<sup>15</sup> in 1925. In the last five years we find many clinicians advocating this form of therapy, particularly Alton Ochsner,<sup>10</sup> Coller and Potter<sup>2</sup> of Michigan, Taylor and Schmidt<sup>16</sup> of Wisconsin, Reid<sup>13</sup> of Cincinnati, Wangenstein and Sperling<sup>17</sup> of Minnesota. It will obviously

take several years before the relative merits of either form of treatment will be ascertained. From a review of the literature it is evident that practically all clinicians have been desirous of improving their morbidity and mortality in the complications arising from appendicitis.

We have followed the teaching of operating all cases immediately after making a diagnosis of appendicitis. The nature of our material is somewhat different than that of other institutions in that our patients are all indigent people residing in Minneapolis. While many of our patients are seen late in the course of the disease, they are never subject to distant transportation after a diagnosis is made. We, therefore, see relatively few walled off abscesses and not many of our patients with generalized peritonitis come in a moribund state, with the pulse weak and thready, the abdomen severely distended and the patient extremely dehydrated. In patients admitted with advanced peritonitis, operation is delayed long enough to replenish fluids, to give transfusions or any other procedure which might safeguard the patient through an operation. The term, generalized peritonitis, while used very commonly, should be restricted to those cases wherein all parts of the peritoneal cavity are involved and, as previously stated, these cases usually come into the hospital in a moribund state. The term, diffuse or spreading peritonitis, meaning that the process is no longer limited to the right lower quadrant, is really a better term to describe most of our cases. After all, the pathologist is the only one who can tell the extent of the involvement of the peritoneal cavity in a generalized infection. The surgeon at operation has opportunity to determine that the process is no longer limited to the right lower quadrant, but this does not mean that the entire peritoneal cavity is involved and in most instances only the lower half of the abdomen is contaminated.

John B. Murphy in a clinic on appendicitis made the following statement: "By operation we take the course of the disease in our own hands—by not operating we leave the case in the hands of a blind and often terribly cruel fate." Christian Fenger, a few years earlier, made the following statement: "Appendicitis is so atypical in its course and presents such an infinite variety of clinical features that a certain time in hours or days cannot be a guide to determine opera-

tion." Certainly the progress of the disease in any one case does not follow any set rule as to days or hours. The pathological processes may have progressed further eight hours after the onset of symptoms in one instance than in a similar case forty-eight or seventy-two hours after the onset. In most instances of spreading peritonitis the area of tenderness and rigidity of the abdomen greatly magnifies the extent of the pathological process within. We have always felt that a case of spreading peritonitis would do better if the cause were removed. It takes a great deal of fortitude to open an abdomen in the face of a diffuse, generalized peritonitis when operation has a very limited amount of relief to offer. Buchbinder<sup>12</sup> in a very splendid article on the treatment of peritonitis made the following statement: "We believe that operative therapy in spreading or diffuse lesions is limited to the source of infection, be it a suppurative appendix or leaking suture line in the bowel. We also believe that early operative attack during the stage of attack is better than the so-called conservative management." He has shown, both experimentally and clinically, that during the spreading stage of peritonitis the mortality is reduced by removing the focus of infection. McGrath and Eiss<sup>8</sup> have shown that postoperative complications are more frequent and severe where the appendix was not removed.

Anyone will agree that a leaking suture line following the resection of a colon is indication for reopening the abdomen. Likewise, a perforated peptic ulcer is best treated by closure of the perforation. Peritonitis due to leakage from a ruptured diverticulum of the colon, perforation by a foreign body or a gunshot wound of the colon, is no different than that caused by an appendix which has sloughed at its base, liberating a large fecalith and leaving the cecum wide open. What hope is there for localization when the peritoneal cavity is being flooded by the liquid contents of the cecum? These are questions which present themselves in abdominal diagnosis when a patient is brought in with a generalized peritonitis. An appendiceal abscess, in the majority of instances, is probably begun as a local process and terminated as such. General peritonitis does not usually localize in the region of the appendix, but more probably in the

pelvis or in multiple areas in the dependent portions of the peritoneal cavity.

Irrespective of the method of treatment of peritonitis, it is obvious that until we have better methods of treating this condition, it will always carry a very definite and high mortality. It is primarily a struggle between virulence of the invading organism and the resistance of the patient and the profession must be open minded to better methods of therapy.

In our own hospital 229 cases were treated in 1932 with a mortality of 10.9 per cent. In 1933, 214 cases were treated with a mortality of 3.7 per cent. In 1934, 182 cases were treated with a mortality of 6 per cent. In 1935, 124 cases were treated with a mortality of 4.8 per cent. Surely these marked variations in mortality cannot be accounted for by variations in technic or errors in treatment. Virulence of the organisms or the virulence of intercurrent infections, such as pneumonia, must be the answer. We had a severe epidemic of postoperative pneumonia in 1932 which made operations almost prohibitive during the fall of that year.

In summary, we have reviewed the mortality statistics for the past ten years at the Minneapolis General Hospital. The mortality rate over the ten year period for all cases treated has decreased 1 per cent. The mortality rate for all suppurative cases, which includes gangrenous appendicitis with local peritonitis, abscess formation and general peritonitis, is approximately 12 per cent. The mortality in cases with localized abscess is approximately 8 per cent. For all cases of spreading peritonitis, the mortality is approximately 21 per cent. The total number of cases studied was 1,276. Appendicitis complicated by abscess formation or spreading peritonitis is three times as common in males as in females. The incidence of appendicitis is approximately the same in both sexes. Appendicitis is essentially a disease of the earlier years of life, 70 per cent of our cases occurring in the first three decades. The mortality in appendicitis complicated by peritonitis is very high. This is in a large part influenced by self medication on the part of the patient, use of cathartics in 50 per cent of the cases, procrastination in seeking medical advice and to a slight extent is due to errors in diagnosis. We feel that until the deferred method of treatment or the so-called conservative method of treat-

ment of appendicitis complicated by peritonitis, is placed on a more rational basis, this method should not be taught for universal use. We feel that in the hands of an individual surgeon this method of therapy may often turn the tide of peritonitis into a more favorable course, but the misapplication of this method would lead to greater disaster than confronts us at present. We feel that there can be no rule as to the number of hours or days after the onset of the disease when one can say that this case should be operated and this one should not. Oftentimes what appears to be a picture of generalized peritonitis from the clinical findings proves to be a local process at operation. Every case of appendicitis with peritonitis must be treated individually. Patients with walled off abscesses or those who have passed the climax of their illness may safely be treated by conservative methods. There is no medical treatment for appendicitis. Mortality in uncomplicated appendicitis is negligible. The problem first to solve is that of prevention of complications and, secondly, that of better treatment of peritonitis.

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### REGIONAL (TERMINAL) ILEITIS\*

O. J. HAGEN, M.D., F.A.C.S.

Moorhead, Minnesota

I AM presenting this paper not primarily to add anything to knowledge of terminal ileitis, but rather to call to attention its existence and to publish again the criteria by which the disease can be recognized and the methods by which it can be properly treated.

Terminal or regional ileitis obviously always has existed but it was not identified as an entity until Crohn, Ginzburg, and Oppenheimer denominated and described it in 1932. Very likely it is not particularly rare, for individual surgeons have recorded a dozen cases occurring in their practices in the last few years. Crohn now has had twenty-eight cases; that is, fourteen more than were reported in his 1932 series.

#### Pathology

In 1932, Klemperer, of Mt. Sinai Hospital, New York, made a searching study of the speci-

mens resected by Berg; I am not aware of anything having been added to knowledge of the pathology since.

Grossly, there is always a tumorous, benign, granulomatous mass and all of the specimens in Crohn's series were from the ileocecal region. It is reasonable to assume, however, that the condition also can exist elsewhere in the small bowel. The tumors naturally will differ in type and vary in size according to the stage at which the disease is recognized. There is extant no description of the microscopic appearance of the tissue in the early stage, since in all the cases in the series the process had reached advanced stages and had given symptoms for more than a year. As has been stated, all the specimens were removed from near the terminal portion of the ileum.

The number of specimens Crohn, Ginzburg and Oppenheimer had for study was thirteen.

\*Read before the meeting of the Minnesota State Medical Association, Rochester, Minnesota, May 5, 1936.



"Microscopically" they wrote, "no specific features or germs can be demonstrated. The stained histologic sections showed various degrees of acute, subacute and chronic inflammation, with variations in the predominance in polymorphonuclear, round cell, plasma cell and fibroblastic elements. In the early stages the lesion is a diffuse one, involving mainly the mucosa and submucosa with the presence of some inflammatory serosal reaction. The mucous membrane shows areas of marked destruction, and at times the glandular structure is almost completely gone, leaving an atrophic layer of epithelium, the result of a regenerative process." Also the authors wrote that some giant cells are found.

The picture, then, is not unlike that of a tuberculous process; nevertheless all methods of investigation used failed to disclose evidence of tuberculosis in any of the thirteen specimens. Inoculations of guinea-pigs, rabbits and chickens with triturated material from lymph nodes adjacent to the lesions and from the intestinal wall all gave results that were negative for tuberculosis; moreover, evidence of pulmonary foci were not found in examination of any of the fourteen patients.

### Symptoms and Signs

The condition is mostly confined to patients who are less than forty years of age and more males than females are affected. The main complaints are of fever, although fever can be absent; diarrhea, but without tenesmus; loss of weight and progressive anemia. The stools sometimes are mushy or liquid, and contain free pus, coagulated lumps of mucus and streaks of blood. Naturally, when the lumen becomes unduly contracted, constipation and symptoms of obstruction appear. Vomiting may occur at times and will occur when obstruction becomes marked. Pain is a prominent symptom, and, since the lesion is usually near the ileocecal region, the pain will occur in the region of McBurney's point or between that point and the umbilicus. It is described as dull and cramp-like and is often relieved to some extent by defecation. Obviously, the symptoms will vary according to the extent of the pathologic process that is present.

The general symptoms are weakness, loss of weight and anemia; the degrees of the anemia will

depend on the profuseness of the diarrhea and on the amount of blood lost. There is only moderate leukocytosis and the temperature varies from normal to 103° F., depending mostly on

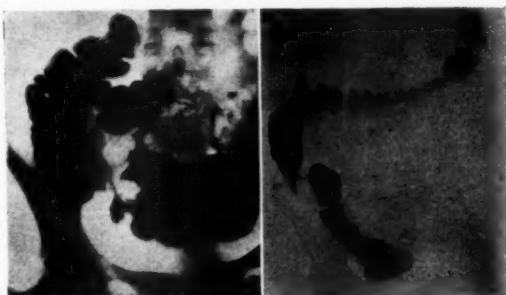


Illustration showing "string signs" taken from article by J. L. Kantor on "Regional Ileitis: Its Roentgen Diagnosis," Jour. Am. Med. Assn., 103:2016-2021, 1934.

whether or not fistulous tracts are forming. These tracts may extend at times through the abdominal wall, into operative appendiceal scars, into the cecum and even to the sigmoid.

### Physical Examination

A mass is palpable in the ileocecal region. Fistulas may be present; there are always some emaciation and anemia; symptoms of intestinal obstruction may be present. The mass is usually somewhat movable and sometimes fills the lower right quadrant; it is firm, irregular and gives rise to tenderness. If fistulas have formed, the position, contour and size of the mass will vary.

On account of the situation of the pain and of the tumor, the patient's abdomen often bears the scar of a recent appendectomy, mute but eloquent evidence of hurried diagnosis. The physician is not always to be blamed, however, for it is not easy at times to make the differential diagnosis. At least half of Crohn, Ginzburg and Oppenheimer's patients presented scars of operation but the symptoms had persisted and the condition of the patients had grown progressively worse; therefore all of the fourteen were submitted to exploratory operations and the tumors were resected.

When the ileum becomes stenotic the patient presents the grave condition of intestinal obstruction with evidence of visible peristalsis and distention.

### Roentgenographic Findings

The "scout film" localizes the obstruction in the lower middle portion of the abdomen, toward the terminal part of the ileum. The constant finding, after a barium meal, is that of delayed motility in the terminal part of the ileum. Of course, when the condition has progressed towards stenosis, what Kantor has designated as the "string sign" is present, and the localization becomes more definite. A barium enema will exclude involvement of the colon, for in terminal ileitis the colon is not involved unless there are fistulas that open into the sigmoid or the cecum.

### Differential Diagnosis

The condition must be distinguished from other diseases, some of which produce a mass in the ileocecal region associated with pain, diarrhea and fever.

The first of these to be considered is nonspecific ulcerative colitis. Roentgenograms made after a barium enema, rightly interpreted, and demonstration of the lesion in the lower part of the colon, will identify this condition in the great majority of cases; it will fail only in that small percentage of cases in which the ulcerative lesions are in the upper reaches of the colon and in the terminal part of the ileum. Nonspecific ulcerative colitis does not cause fistulas, except near the rectum and anus, and a palpable mass is a rarity.

Ileocecal tuberculosis, with all its evidences, is rather easily diagnosed clinically and by laboratory methods and should not lead astray a reasonably careful clinician.

As was stated, Crohn, Ginzburg and Oppenheimer commented that in at least half of their original cases of regional ileitis, operation for appendicitis had been performed. In The Mayo Clinic series were eighteen patients, ten of whom had undergone appendectomy. Semansky, of the Minnesota University Hospitals, in a careful, recent review of the subject, is authority for the statement that in half of the cases abnormalities of the terminal portion of the ileum were noted at the time of the operation and that in cases in which appendectomy had not been done previously, the mucosa of the appendix was normal. There was a change only in the outer coats, attributable to the presence of adjacent inflammatory disease.

There remains then only lymphosarcoma, intestinal or mesenteric tuberculosis and Hodgkin's disease, all of which, in many features, simulate regional ileitis. Obviously only at the operating table, at postmortem examination, and by examination of tissue can these conditions be distinguished from one another. Crohn, Ginzburg and Oppenheimer have stated, "Sarcoma of the intestine is usually multiple, causing dilatations at various levels, and involves the jejunum as well as the ileum and not particularly just 8 to 12 inches of the small intestine." In Hodgkin's disease there may be a palpable mass but the characteristic monocytic blood picture or examination of a regional lymph node will reveal the true nature of the process. Actinomycosis of the ileocecal region may result in fistulas, but the yellow granules often can be demonstrated. Carcinoma may be present, but both conditions call for the same treatment, surgery, and biopsy of the removed segment will allow the diagnosis to be made.

### The Clinical Course

The early stage naturally will be characterized by vague intestinal distress and pains in the ileocecal region. It is not inconsistent to believe that some cases are abortive and terminate in spontaneous recovery. But in cases in which the condition becomes progressively worse, the course may include: (1) acute intra-abdominal disease with peritoneal irritation; (2) symptoms of ulcerative enteritis; (3) symptoms of intestinal obstruction; (4) persistent and intractable fistulas in the right lower abdominal quadrant.

### Treatment

As has been said it is possible that in some of the milder cases the patients eventually recover without operation, but if they do so recover it is not likely that medical treatment has anything to do with the result. The treatment is surgical and the ideal procedure consists of dividing the ileum well above the lesion, removing the affected portion and the ascending colon, and making side-to-side anastomosis of the proximal end of the ileum and the transverse colon. The surgeon should not forget to perform ileostomy about four inches proximal to the site of the ileocolostomy, using a mushroom catheter, with its exit through a stab wound near the center of the abdomen. A short circuiting oper-

ation is permissible only when the condition of the patient is so perilous, or when the tumor is so involved with other structures, as not to justify the major procedure at the time. One always can reoperate later, when the patient's condition

has improved sufficiently to warrant the more formidable attack. Restitution of the patient to perfect health is the rule and is the primal justification for the surgical procedure as here outlined.

## ACTIVE PULMONARY TUBERCULOSIS WITHOUT SYMPTOMS\*

EVERETT K. GEER, M.D.

*Saint Paul*

THE purpose of these remarks is to present a phase of pulmonary tuberculosis which has been recognized and discussed for several years and which needs wider and fuller appreciation. Emphasis for this particular problem is desirable because of its importance to the patient and to his community. The thought in mind is the silent lung parenchymal lesion found particularly in the teens and twenties which in many instances progresses without symptoms for months, or even years.

It is discouraging but still true that the majority of persons when first found with active tuberculosis of the lungs have advanced lesions. This situation obtains in spite of the active campaign against tuberculosis waged in the past thirty years comprising intensive education of the public, a marked increase in sanatorium beds, a substantial improvement in undergraduate medical training as well as postgraduate instruction.

An encouraging break in this persistent cloud is the increasing number of people asking for advice who have definite lesions in their lung parenchyma which have not reached the symptom-producing stage. This group is becoming larger for three reasons. First, families and groups in which individuals with positive sputum have been found are being intensively investigated.

Secondly, there is a more common use of the Mantoux surveys whereby large numbers of apparently healthy individuals such as high school and college students, employees of large industrial concerns and hospitals, are tested with tuberculin, the positive reactors submitting to roentgenograms of the chest and physical examination. Thirdly, more physicians are using the Mantoux

test routinely in their practice and following the positive reactors as just described. As these three methods of tuberculosis control develop and are extended in any community there accrues to the physician in that community not only an increase in his practice but an augmented obligation to give sound counsel.

It is not easy to get away from the beaten path of undergraduate instruction and textbook pictures. That particular concept as it relates to lung tuberculosis reveals a person who is coughing, expectorating sputum with demonstrable tubercle bacilli, having afternoon or evening fever, losing weight, experiencing vague digestive symptoms, chest pains, hemoptysis and so forth, and exhibiting definite abnormal physical signs in the chest as well as gross roentgenographic lesions. This type of tuberculosis from a diagnostic standpoint requires no unusual acumen. It does require a long period of treatment usually in an institution to control the disease.

The type of pulmonary tuberculosis, however, which has provoked this discussion is not the textbook picture. On the contrary, it is that illustrated by the person who feels perfectly well, presents no symptoms whatsoever, may give a history of exposure to an individual known to have positive sputum, or who has been sifted out in a Mantoux survey or has been tested by his physician in the course of a routine examination. He does exhibit a positive reaction to a skin tuberculin test and is found to have an infiltration in the chest roentgenogram usually in the first or second interspace. Rarely will these people have any abnormal physical signs in the chest.

This type of lung disease can easily lead one to regrettable conclusions. Because symptoms

\*Read before the annual meeting of the Minnesota State Medical Association, Rochester, Minn., May 6, 1936.

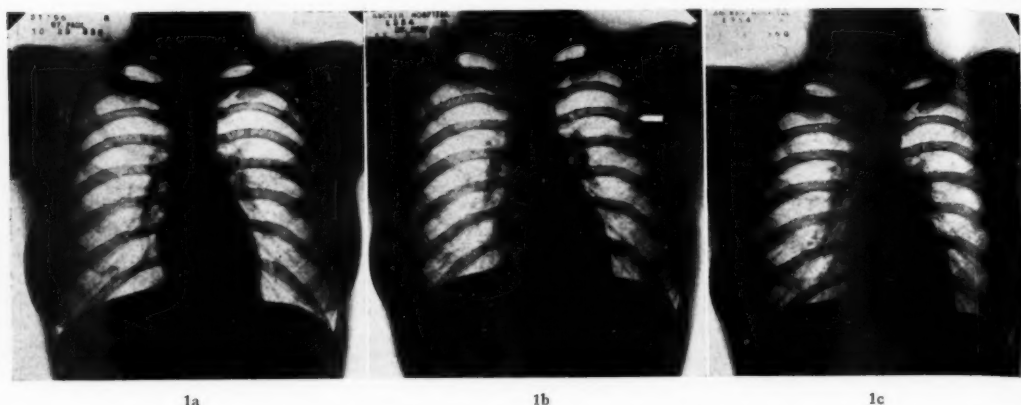


Fig. 1. Case 1. *a*, October, 1933—Chest radiograph shows no abnormalities. *b*, November, 1934—Parenchymal lesion in left second interspace. *c*, January, 1936—Complete resolution of left upper lesion without treatment.

are absent there is a strong temptation to assure the patient that he has "only a small spot on the lung," that x-ray shadows by themselves do not produce illness, that he has no fever, has lost no weight, has no cough, and therefore cannot have active tuberculosis requiring treatment or even observation. Stories such as these are not unusual. The picture which presents itself months later is one which requires prolonged treatment with an uncertain result.

The behavior of these early symptomless lesions is unpredictable. Some will retrogress without treatment. This type is well illustrated in Case 1.

*Case 1.*—Miss I. H. entered training at Ancker Hospital in 1927, at the age of nineteen. In 1929, she had a positive Mantoux test and on finishing training, in 1930, a chest film was clear. In October, 1933, she returned to the hospital for general duty at which time chest films (Fig. 1*a*) were again normal. In November, 1934, a routine chest film (Fig. 1*b*) showed a definite parenchymal infiltration in the left second interspace. She continued on duty and periodic roentgenograms have shown a consistent decrease in the lesion to the point where it is now scarcely perceptible (Fig. 1*c*). At no time during this period has she been ill.

Others will be discovered and with observation will be found progressive and with bed rest will clear in a satisfactory manner as is shown in Case 2.

*Case 2.*—Dr. M. D., aged thirty-two, who came to Ancker Hospital as an interne in July, 1934. His Mantoux test was positive at the time but films of his chest (Fig. 2*a*) were clear. On completing his in-

ternership in June, 1935, a routine chest film (Fig. 2*b*) disclosed a lesion in the left first interspace about the size of a small pea. He presented no symptoms but was advised to have frequent follow-up examinations. After a three weeks' vacation in northern Minnesota, he returned for reexamination and his chest film, on July 8, 1935, disclosed an increase in the lesion (Fig. 2*c*). He was put to bed and periodic roentgenograms showed a decreasing lesion which, after a few months (Fig. 2*d*), became stationary and remained so.

This type of disease is also shown in Case 3.

*Case 3.*—Miss M. M., who entered training at Ancker Hospital, in February, 1933, at the age of nineteen. She had a positive Mantoux test and her chest roentgenogram was negative. She remained well. A routine chest film in January, 1936, revealed an infiltration in the right lung at the level of the third rib. She was permitted to continue on duty as she felt perfectly well. A month later a chest film disclosed an extending lesion and, although she had no symptoms, she was put to bed and the lesion is decreasing.

Still others will pursue an indolent course for months or years and then within a comparatively short time will develop fulminating disease. Cases 3 and 4 typify this group.

*Case 3.*—In September, 1931, Mrs. La P., at the age of eighteen, entered training at Ancker Hospital. Her Mantoux test was negative and her chest film clear. In March, 1932, another Mantoux test was negative but in September, 1932, it was positive and a chest film at the time was still clear. In May, 1934, a lesion in the right first interspace with apparent paratracheal glandular involvement was noted. She felt quite well and was followed by periodic roentgenograms which showed little change. She completed training in the fall of 1934 and was advised to return for continued observation. In November, 1934,



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a definite decrease in the lesion was observed and in December there was no change. She failed to report again until April, 1935, when an increase in the parenchymal infiltration was noted in the right upper lobe. She was advised to enter the hospital but re-

in the left first interspace (Fig. 3b). She felt perfectly well. In April, a decrease was apparent in this lesion (Fig. 3c). In May, a follow-up x-ray was ordered but not taken. On June 18, she had a frank hemoptysis and a chest film (Fig. 3d) showed an in-

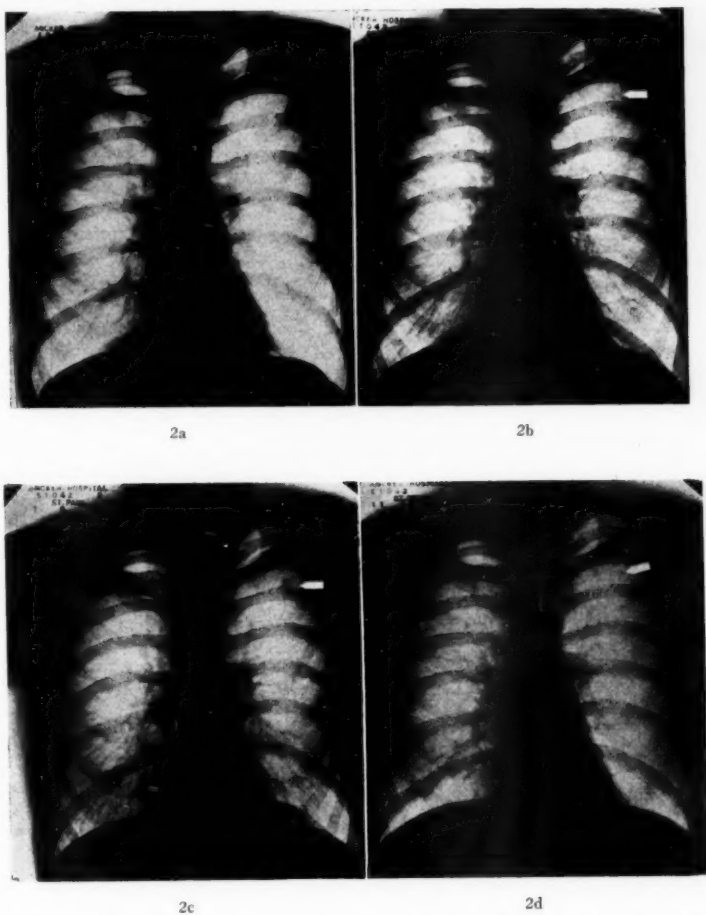


Fig. 2. Dr. M. D. a, August, 1934—Chest radiograph shows no abnormalities. b, June, 1935—Small lesion in the left first interspace. c, July, 1935—Increase in the left upper lesion three weeks later. d, November, 1935—After four months' rest. Resolution of lesion in the left upper lobe.

jected this counsel and married. In September, 1935, she returned for examination, four and a half months pregnant and with an extensive excavating lesion in the right upper lobe. Pneumothorax was begun at once and in February, 1936, she delivered a healthy daughter and had no subsequent trouble.

*Case 4.*—Miss C. H. entered training at Ancker Hospital, in September, 1933, at the age of nineteen. Her Mantoux test was negative, but her chest film showed a calcified area in the right lower lobe (Fig. 3a). In February, 1935, her Mantoux test became positive and a small parenchymal infiltration was noted

crease in the left upper lobe lesion with cavitation. Pneumothorax was instituted at once which had to be supplemented with a phrenicectomy to control the disease.

The discouraging type which refuses treatment early because she is lulled into a sense of false security by the absence of symptoms is portrayed clearly in Case 5.

*Case 5.*—Miss H. H., aged twenty, as a high school senior was found to have a minimal lesion in her right

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upper lobe in a Mantoux survey. This disease was identified in May, 1932, and because she felt well she thought the doctors were "crazy" to suggest hospital observation. In September, 1933, sixteen months later, she came of her own accord and asked for treatment.

their school work or vocational pursuits?

To lay down a single rule for all such cases would be arbitrary, in many instances unwarranted and in some disastrous. As has been

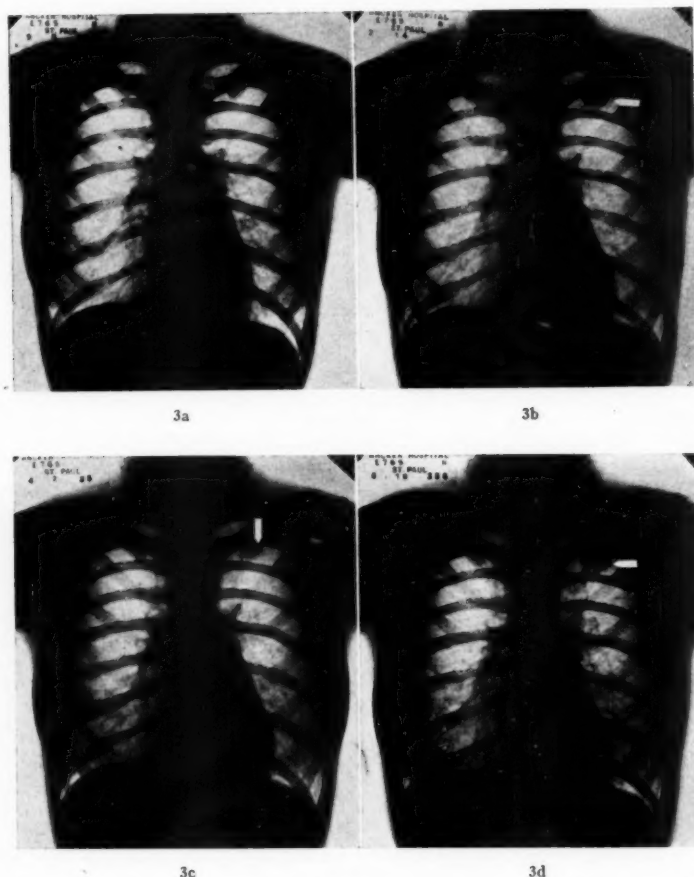


Fig. 3. Miss C. H. a, September, 1933—Chest clear except for calcification of the right lower lobe. b, February, 1935—Parenchymal lesion in the left first interspace. c, April, 1935—Decrease in the left upper lesion. d, June, 1936—After hemoptysis. Increase in the left upper lesion with cavitation.

Then she had a cough, positive sputum and an excavating right upper lobe tuberculosis. Pneumothorax and a ten months' stay in Ancker Hospital controlled her disease.

These illustrative cases raise the pertinent question as to how one should manage persons with symptomless tuberculous lesions in their lung parenchyma. Shall we permit them to continue in school or at work under close observation? Should we advise a period of observation in a hospital or sanatorium? Or should we use ambulatory pneumothorax and not interrupt

shown in the instances cited above, the course is variable and impossible to forecast.

If we are dealing with people such as hospital employees, students in schools with adequate health service facilities, or individuals who will intelligently coöperate by reporting for necessary reexaminations, in many instances it will be safe to permit continuance of usual activities if frequent chest roentgenograms are taken. These may be desirable once a month and occasionally at shorter intervals.

If the person with the silent parenchymal lesion is not in a position to be watched closely, or if he is the type of person who is prone to hide his head in the sand and disregard sane advice, a period of sanatorium observation should be urged and in no uncertain terms. This, beyond doubt, is the ideal method of handling such individuals so that nothing is left to chance. And here, again, serial roentgenograms are essential to know accurately which way the wind is blowing.

If the infiltration decreases, a watchful-waiting policy should be pursued. If with bed rest an increase in the lesion is noted, collapse therapy should be considered and for those whose lesions progress, as in some of the recited cases, artificial pneumothorax without delay is imperative. But for the symptom-free non-progressive case, pneumothorax is clearly not indicated without a period of observation.

When collapse treatment is advisable, artificial pneumothorax should be tried first and should be induced in a hospital or sanatorium and not in one's office. Because of the apparent simplicity of induced pneumothorax, its smooth course in most cases, and the satisfactory results obtained where a good collapse is effected as reported by careful workers from reputable institutions, an unbridled enthusiasm for the use of this procedure has appeared in certain places for ambulatory patients. And here, to avoid misunderstanding, let it be clearly understood that backed by an extensive experience I have a clear picture in mind of the usefulness of artificial pneumothorax for lung tuberculosis. Full well do I know that the person with progressive or advanced tuberculosis in his lungs who obtains an effective collapse with air is fortunate beyond words. But it also must be recognized that its use has dangers and complications. Recently two patients in Ancker Hospital developed spontaneous pneumothorax within six hours after a primary injection of air. In both instances the respiratory distress developed so rapidly and became so severe that had they not been in an institution where prompt service was available, death would have ensued in a short time. Pleural shock and air embolism are uncommon but do occur and pleural effusions may appear and produce acute illness. However deserving of consideration these factors may be, they do not markedly condition my reactions regarding am-

bulatory pneumothorax. What does influence my thinking is the undeniable fact that tuberculosis in the lung parenchyma even in the minimal stage is still a serious and potentially fatal disease. To disregard the constitutional nature of the malady is a mistake committed each time ambulatory pneumothorax is used without due consideration of the possibilities and facts to which allusion has just been made. If pulmonary tuberculosis is inherently the destructive killing thing we know it to be, sound thinking cannot accept as adequate therapy the periodic injections of air into the pleural cavity of a person who continues to pursue his usual daily activities.

In communities such as Philadelphia and Chicago, where the demand for tuberculosis greatly exceeds the supply, ambulatory pneumothorax for suitable cases is justifiable and is being used for frankly active cases. It is, however, a distinctly "second best" measure and should be condoned only in those parts of the country where the "first best" measures are not available. Modern sanatorium care is unquestionably the "first best" measure.

It is quite obvious from this short discussion that the problem of the silent parenchymal lesion is important but not simple nor one with only one solution. There are good reasons for advocating that this particular phase of pulmonary tuberculosis be made a major objective in the anti-tuberculosis campaign. In the first place is the strong appeal to the individual. It has become almost axiomatic that, granting good treatment, the person found with minimal tuberculosis will achieve a lasting satisfactory result. The slogan, "Early discovery, early recovery," has a factual basis. The majority of these silent lesions are found in the minimal stage. In the second place, these people have tuberculosis which has not progressed to the infectious stage and with proper care will not. One cannot conceive of a better type of tuberculosis control in the absence of a specific preventive than a systematic, persistent search for persons with these silent, non-infectious tuberculous lesions of the lung. The identification and adequate treatment of such people will forestall an incalculable dissemination of tubercle bacilli. One major obstacle to be overcome is the task of convincing persons who do not feel sick that they have something which in time may produce illness and therefore demands observation or treatment. Here enters into the

## MILK AND HONEY DIET—HAYDAK

picture the art of medicine, wherein that attribute of many physicians which induces confidence and promotes coöperation in their patients is clearly shown.

### Conclusions

1. Active pulmonary tuberculosis without symptoms occurs frequently as the silent progressive parenchymal lesion found not uncommonly in young adults.
2. It can be detected in most instances only by a chest roentgenogram.
3. Its course is unpredictable and therefore

requires close observation by serial roentgenograms of the chest.

4. Aside from those persons employed in institutions, students, or employees of concerns who can be followed closely, the safest and best course to follow is a period of sanatorium study.

5. Ambulatory pneumothorax for persons with these silent lesions is justifiable only in communities where adequate sanatorium beds are unavailable and when the lesion is progressive.

6. Pulmonary tuberculosis has been, is and will be a serious disease requiring careful study and intelligent, meticulous treatment.

## A PROLONGED TEST OF MILK AND HONEY DIET

MYKOLA H. HAYDAK, Ph.D.

Instructor in the Department of Agriculture

University of Minnesota

Minneapolis

IN the course of studies on nutritional anemia of rats, carried out during the past two years at the University of Minnesota, the writer obtained clear evidence of the value of adding honey to the whole milk diet of these animals. The beneficial effects were particularly marked when honey of the darker type was used. In view of these results he decided to play the rôle of an experimental animal and to test personally the effect on man of a diet restricted to milk and honey. The experiment was continued for a period of twelve weeks.

*Diet and method.*—The unit of the diet consisted of a mixture of one quart of milk with 100 gms. of honey. The latter was dissolved in a small amount of milk. This solution was then thoroughly mixed with the rest of the milk. The composition of this unit is given in the following table.

COMPOSITION OF THE UNIT OF THE DIET						
Constituents	C.C.	Cal	Fe mgms.	Cu mgms.	Mn mgms.	Solids gms.
1 quart of milk...	950	684	2.28	0.14	0.03	114
100 gms. of honey...	70	335	1.00	0.10	0.22	80
	1020	1019	3.28	0.24	0.25	194

As a matter of fact, 1 c.c. of the mixture is equal to one calorie. This makes calculation of the diet very simple. Obviously the mineral con-

tent of honey varies and the numbers given in the table represent an approximate average taken from determinations by various authors, namely, 10 mgms. of iron, 1 mgm. of copper and 2.2 mgms. of manganese per kg. of honey. Darker honeys will tend to increase the mineral intake and light honeys will tend to diminish the mineral intake per unit.

As a rule, 500 c.c. of this mixture were ingested every two hours from 8 A. M. to 8 P. M. Buckwheat honey (dark) was used as a supplement to milk during the first four weeks of the diet. Sweet-clover-basswood honey (light) was used for the next four weeks. Then, the intake of dark and white honeys was alternated daily. There was a transition period before the beginning of the diet, consisting in a gradual abolition of breakfasts, lunches and dinners and a substitution for them of the milk-honey diet (November 19 to 27). A similar transitional period was maintained after the expiration of the diet. During this period (February 20 to March 2) skim milk powder, dried yeast, and crackers were added to the diet in increasing quantity; farina and chicken soup were used the latter part of the period. Starting March 3 normal breakfasts, lunch- and dinners were gradually resumed.

Pasteurized milk from the University Dairy was used throughout the experiment. Weekly



changes in weight and in the hemoglobin reading (Haden apparatus) were recorded. Weekly urine analyses for sugar and proteins were performed. Daily bowel movement was noted, general subjective feeling and other symptoms, if any, were observed. Iodine (1 drop of 10 per cent. K I solution) was occasionally added to the diet and a little NaCl dissolved in water was ingested almost daily. Weekly consultations were held with Dr. Irvine McQuarrie of the Pediatrics Department of the University.

**Results.**—The diet lasted from November 28, 1934, to February 19, 1935. The initial weight (November 20) was 137 pounds without shoes. During the experiment the weight oscillated between 134.5 and 135.5 pounds. Initial hemoglobin reading was 12 gms. per 100 c.c. of blood, which changed to 13 gms. per 100 c.c. of blood by the beginning of the seventh week. The latter figure remained to the end of the experiment. There was no sugar or protein in the urine. As a rule the bowels moved daily. Occasionally there was no daily bowel movement. However, it was resumed the next day without the use of any laxative. Feces were peanut-like in consistency, yellowish-gray in color, comparatively soft, and were almost odorless. The average frequency of bowel movement for the first four weeks of the diet was 1.4 times daily and for the remaining period of the diet, 1.2 times daily. A general feeling of well-being was experienced. The ability to work was not impaired by any means and was rather better than the average. There was no feeling of sluggishness or tiredness noticed throughout the duration of the experiment.

The fact that pasteurized milk is low in vitamin C was fully appreciated. However, since the period of the development of scurvy has been said to be from four to eight months (Med. Res. Council, 1932), the addition of orange juice was postponed to the latter part of the period of observation. Apparently this addition was delayed too long because certain symptoms somewhat suggestive of vitamin C deficiency were noticed. Confirmation of the clinical impression that they were symptoms of a dietary deficiency was indicated by their disappearance after orange juice was added to the diet. The phenomena observed will be dealt with in chronological sequence.

On December 8 a small amount of fresh blood was noted on the feces. There was no obvious

explanation for this. The stool passed was not considered to be sufficiently hard to cause mechanical injury of the bowel. Pain was not felt during defecation. This phenomenon was observed on a number of occasions later in the experiment. On December 25 a general dryness of the skin, particularly on the lower and upper limbs, was noticed.

About the middle of January a red ring was noticed around one of the molars of the lower jaw. Since the gums did not bleed and were normal in every other respect, this sign was not considered to be of great significance. At about the same time it was observed that a number of small reddish papules were persistently appearing on the forehead and to a lesser degree on the face. The writer did not have them before, but since this phenomenon is so frequently observed in otherwise healthy people, no attention was paid to it. Later in January a slight loss of appetite was observed.

On January 30 (64th day of the diet) there was a persistent headache during the night. The next evening the writer felt a pain over the region of the heart which lasted most of the night. In the morning there was slight urethral pain during urination. In the evening of the same day there was a noticeable insensitiveness of the tongue. On examination symmetrical ulcerations were found over the base of the tongue and whitish round spots were found scattered widely over its surface, particularly at the edges. These were slightly painful. These symptoms lasted until February second. On the latter day a capillary fragility test was performed by means of a sphygmomanometer cuff on the arm (95 mm. pressure for 15 min.).

There were 94 petechiae for a 1.5 inch circle. At 2 P. M. 80 c.c. of orange juice were ingested. At 5 P. M. the soreness of the tongue considerably receded. Eighty c.c. of orange juice were ingested at 5 P. M. and 7 P. M. At 9 P. M. the tongue manifested only a slight feeling of insensitiveness. There was no soreness at all. The appetite was much better. After that date about 500 to 700 c.c. of orange juice were ingested daily.

On February 7 the general dryness of the skin of the upper parts of the body disappeared. It was still present on the lower limbs. The small reddish papules on the forehead disappeared also.

By February 10 the red ring around the molar had disappeared completely.

On February 13 a little blood appeared in the feces for the last time. There was not a single instance of reappearance of the phenomenon afterwards. The capillary fragility test showed 34 petechiae to the 1.5 inch circle at 95 mm. pressure.

On February 28 there were 4 petechiae at 65 mm. pressure (15 min.) and 28 petechiae at 95 mm. pressure.

Although certain of the phenomena described are not given in the medical literature as deficiency symptoms, the fact that they disappeared completely after the addition of liberal amounts of orange juice, suggests that they might have been the symptoms of so-called "latent scurvy."

Two hundred and ninety-one quarts of milk and 63 pounds of honey were consumed during the twelve weeks of the experiment.

*Summary.*—A case of an exclusive milk-and-honey diet lasting for three months is described.

The hemoglobin content of the blood was slightly increased. The weight remained practically constant. There was no protein or sugar in the urine. The bowels moved normally. The general feeling was good. The ability to work was not impaired. There was no sluggishness or tiredness noticed.

Early symptoms of vitamin C deficiency were noticed toward the end of the period of observation. They were cured by an addition of orange juice.

*Acknowledgments.*—The author is deeply indebted to Dr. I. McQuarrie for counsel during the experiment and for many valuable suggestions at the time of preparation of the manuscript. The author expresses his sincere appreciation to Dr. W. A. Riley and Dr. M. C. Tanquary for their interest in the experiment. Thanks are due to Dr. W. B. Combs for making available the milk supply from the University Dairy and to Dr. C. Adams and Dr. R. A. Jensen for hemoglobin determinations.

## BLOOD TRANSFUSION\*

E. N. PETERSON, M.D., F.A.C.S.

*Eveleth, Minnesota*

FEW surgical procedures now in common use have met with such widespread acceptance and success as blood transfusion. This success has been achieved only after most discouraging initial trials which resulted in the loss of four individuals, three donors and one recipient, the latter, Pope Innocent VIII, who died in 1492 following an attempted blood transfusion. For the next one hundred and seventy-five years, no reference is made in the literature to blood transfusion until, in 1665, Richard Lower successfully transfused dogs by means of goose quills. Two years later Jean Baptiste Denys gave sheep's blood to patients, which resulted in hemoglobinuria. In the succeeding years many novel methods of transferring blood from the donor to recipient were devised and used but the results were so uncertain and so often fatal that the art of blood transfusion became exceedingly unpopular and was banned by decree in several countries.

Uncertainty prevailed until Shattock and Landsteiner during the years 1890 to 1900 conclusively demonstrated isoagglutinins and isohemolysins. In 1906 Jansky and later, in 1910, Moss identified four main groups, into one of which all persons were found to belong. Upon these scientific facts the art of blood transfusion was revived and is today, if properly done, a safe and valuable therapeutic procedure.

Blood transfusion is the transfer of blood from one person, designated the donor, to another individual, the recipient. The blood is obtained from the donor, usually from the cubital veins, except in the immediate direct method as done by Horsley in which the radial artery is anastomosed to the veins in the arm, in which case an arterial supply is necessary. It may be given to the recipient by one of three routes, intravenous, intramuscular, or intraperitoneal. The methods of administration are designated as *direct*, in which the blood is taken from the donor and, without addition of chem-

\*Read before the annual meeting of the Minnesota State Medical Association, Rochester, Minnesota, June 5, 1936.

icals or contact with the air, is administered to the recipient at once; the *indirect* method, in which various closed containers are used for the collection of blood and from which it is transferred to the recipient; the *indirect citrate* method, in which sodium citrate is added as anticoagulant; *autotransfusion*, in which whole blood taken from the recipient is given intramuscularly for its protein stimulation; *immunotransfusions*, in which blood is given for transfer of immune bodies rather than blood loss, either primary or secondary; and *intrapertitoneal transfusions*, in which the citrated blood is given intraperitoneally.

Mention is made of the use of cadaver blood as reported by Russian clinicians. The advantages of the use of cadaver blood are many but careful study of the reports leaves some doubt as to its practical use. It is hoped more will be done to make safe and popular the use of cadaver blood. Gradwohl, in his recent text, reports infection in specimens obtained from cadavers and suggests further study before such procedures be generally adopted.

A review of the literature reveals that blood transfusion has been used for nearly every ailment to which man may fall heir. In general, blood transfusion is indicated whenever a blood loss has occurred from whatever cause and to such an extent as to so alter its quality and quantity that it is unfit to fulfill its physiological duties (Lisrink, 1872). Bernheim, in 1913, advocated blood transfusion in conditions other than dire emergencies following excessive hemorrhage. He referred specifically to pernicious anemia and other anemias and encouraged that transfusion be done before permanent and irreparable damage occur to the myocardium and nervous system.

The high mortality accompanying the early transfusions made it a procedure of emergency only and in many cases the patient succumbed in spite of the transfusion rather than because of it. Today, with a minimum of reactions and less than 0.39 per cent mortality, the indications for transfusions are increased. Excepting the autotransfusions of dermatology and the immunotransfusions, more frequent in pediatrics, the greater number of blood transfusions are used in surgical procedures. Most dramatic of all recoveries from transfusion of blood are in those who have suffered a sudden blood loss

from trauma or surgical operations, but equally important are those secondary anemias, from whatever cause, that demand blood transfusion.

At the More Hospital and Clinic a blood transfusion is not usually indicated unless the r.b.c. is less than 3,500,000 and the hemoglobin 50 per cent or less. Surgical patients with lower readings are transfused before operation. If in a case of secondary anemia there is no evidence of improvement within a week, a blood transfusion is advised. A donor is made available to be used if necessary immediately following operation. A registry of donors, who have been previously grouped, whose Wassermans are negative and who, in so far as it is possible to determine, are free from diseases, is maintained. From this group of forty or more we can usually find a donor within a short time, if the relatives do not match or the emergency does not warrant a delay.

Some contraindications to intravenous transfusions have been found, namely, myocarditis, pneumonia, laryngeal diphtheria complicated with bronchopneumonia, and, until the work of Mosenthal and Ashe, chronic nephritis.

Landon, in a series of 100 cases of acute infectious diseases, including diphtheria, scarlet fever, measles, pertussis, poliomyelitis, typhoid fever, streptococcic septicemia and post-measles encephalitis, noted that blood transfusions were of value in preoperative scarlet fever complications, such as mastoiditis, adenitis, etc., in broncho-pneumonia following pertussis and in cases of anemia following protracted illnesses.

From 1900 to 1910 blood transfusion was done on the basis of three main groups. In 1906 Jansky recognized a fourth group but did not make known his findings until after Moss in 1910 had reported his fourth group. The groups are identical except that Group I Jansky corresponds to Group IV Moss and Group IV Jansky is Group I Moss. Reactions continued in spite of apparent proper matching and, in 1923, Guthrie and Huck recognized more than four groups and accounted for some of the post-transfusion reactions. The additional groups of Guthrie and Huck are uncommon and represent but a small percentage of all persons.

For the purpose of more general and accurate understanding, a universal classification has been developed in which the four main groups are designated as O-A-B—and A.B. corresponding

to Groups I, II, III and IV Moss; IV, II, III, I—Jansky. In grouping recipients it is necessary to specify which classification is followed. We have adopted the Moss classification in our work and, unless otherwise so stated, all references made to groups will be according to that classification.

Various statistics reveal the percentages in the respective groups as follows: Group I—2.5 per cent; Group II, 40-42.5 per cent; Group III, 9-15 per cent; and Group IV, 43-43.5 per cent. About 83 per cent belong to Groups II and IV. There is a familial tendency for blood groups to appear in accordance with Mendel's law and the difference in group percentages might be due to family groupings by different workers.

The particular blood group to which an individual belongs is not well established until one year of age. Blood groupings are made possible by the presence of isoagglutinins and isohemolysins. In its practical application it means that it is possible to determine in advance the compatibility of the proposed donor's blood with the recipient's blood. This is easily accomplished in the following way: Serums of known Groups II and III are used to test the blood of donor and recipient. If there is agglutination with serum of both groups the individual belongs to Group I; if there is agglutination with Group III serum only, he belongs to Group II; if the agglutination occurs with Group II serum, he belongs to Group III; and if there is no agglutination, he is in Group IV. The apparent facts from these results make Group IV appear a universal donor and Group I a universal recipient. When an emergency presents itself, these conclusions may be accepted and a universal donor used in the absence of one more accurately matched. But far more desirable is the donor whose serum upon testing does not agglutinate the cells of the recipient. Under no circumstances must the serum of the recipient agglutinate the cells of the donor. In a dire emergency, however, because of the dilution of the serum of the donor, it is not entirely necessary that the serum of the donor does not agglutinate the cells of the recipient. This evident exception is possible because, even though agglutination occurs, hemolysis does not always take place. Ninety-seven per cent of bloods contain isoagglutinins and only 25 per cent con-

tain isohemolysins. It is therefore possible for agglutination to occur without hemolysis but hemolysis without agglutination does not occur.

It is our practice to insist on perfectly matched donors, that neither serum produces agglutination of the cells of the other, as recommended by Brooks, Burwell, Copher, Doris, Stow, Gradwohl, Guthrie and Hucks, Arrendell, Cutting and others.

Osborne, Allen and Bruce advocate the use of a universal donor for Group II recipients, inasmuch as fewer reactions result than from Group II donors. They recommend the use of Group IV serum in addition to that of Groups II and III in typing recipient, assuming that serums II and III will not deteriorate at the same time. They state there are two groups in Group II, and others, who agree, classify them as fast twos and slow twos. Added precaution must prevail when the recipient is a Group II.

In those cases where more than one transfusion is necessary, always match the proposed donor before giving a second transfusion even though he has previously matched perfectly. Cross matching is of greatest importance in those requiring multiple transfusions. It is far better to transfuse with safety, for many times recovery may hang in the balance and even a slight reaction may convert potential recovery into a fatality.

Emergency measures, intravenous saline, and glucose, gum acacia, and the medications for treating shock, are always more readily available than blood for transfusions and can be given more promptly. Blood, unless it is compatible, should not be given. There must be no agglutination and no attending reaction if the transfusion accomplish its purpose. A patient, whose condition presents an emergency requiring transfusion, demands, all the more, compatible blood.

Blood transfusions should be more generally used and not only when all else has failed. While it is, to the laity, an emergency procedure, a warning goes with the urge for more blood transfusions in that there is a tendency to overlook factors of safety in all therapeutic measures which gain widespread usage.

A blood transfusion is a surgical procedure and must be attended by the same skill and aseptic technic that makes for success in any operation. Our procedure of choice is the citrate method. We have had no reactions of

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importance. There are those who, while not condemning the indirect citrate method, believe the direct method to be superior because the blood is given unmodified. But there are advantages to the citrate method which appear to warrant its use. (1) It is extremely simple; (2) the patient need not be moved or become an integral part of an operation; (3) the results are equal to those of the direct method; (4) a citrate transfusion requires less skilled help; and (5) it can be done with little or no reaction, if done correctly.

No attempt is made here to condemn any other method of blood transfusion so long as it is done without reaction and with good results. A reaction is more than a rise in temperature and is accompanied by some other complaint such as chill, pain, dyspnea, urticaria, hemoglobinuria, jaundice, shock, or anaphylaxis of some degree.

The errors of blood transfusion and the cause of post-transfusion reactions can be found usually in faulty grouping. Faulty grouping is due most commonly to faulty serums; either that they have deteriorated or there has been some sudden reduction in titre. It is also due to hurried laboratory examination and for that reason it is advisable to wait an hour before concluding there is no agglutination. Embolism, infection, syphilis or malaria, delayed reaction or too rapid administration of blood to the recipient, are errors which can be controlled by technic and care and need not occur. Certain drugs, anesthesia, radiation with x-ray and terminal progressive toxemias may alter the blood grouping and make perfect matching with a donor impossible. Under such circumstances a transfusion might easily be a dangerous procedure.

When a donor is properly matched, has been found to have a negative Wassermann and is free from other communicable diseases, his arm is prepared as for any surgical procedure, usually in the operating room. At the same time the arm of the recipient is similarly prepared and covered with sterile drapery. All utensils and glassware are thoroughly rinsed in sterile 2 per cent sodium citrate made of distilled water and autoclaved with the other supplies for forty-five minutes at 15 pounds pressure. The tubing and

all needles are washed with citrate solution. Nothing comes in contact with the blood that is not previously washed in sterile 2 per cent sodium citrate. An amount of 2 per cent sodium citrate equal to 10 per cent of the proposed amount of the transfusion is placed in a graduate and into this is withdrawn the blood from the donor. The mixture is stirred to prevent clotting. The citrated blood is then filtered (although some doubt its necessity) through several layers of sterile gauze and given by gravity into the vein of the donor, slowly, requiring in all about thirty minutes for the entire procedure. The needles should be 15 gauge and the tubing, previously prepared by washing in cold water for several hours, connects a gravity chamber with a T syringe. Saline is placed in the gravity tube and chamber and all air removed, the needle inserted in the vein and, when good flow is established, the citrated blood is added. Normal saline is again added when the blood is leaving the gravity tube and thus none is lost. There are some who object to sodium citrate because of its effect on the platelets. It is, however, eliminated rapidly, as determined by Salant and Wise, and, contrary to some opinions, it has no effect on the red blood cells, as determined by Mellon, Hastings and Casey. Lewisohn has found that five grams of sodium citrate may be given with safety. Gichner, after his investigations, found citrated blood was utilized quite as well as unmodified blood and recommended its use.

Ashly by a series of unique observations, determined the life of a transfused corpuscle to be thirty days or more and also found that the beneficial results were due to the transfused corpuscles themselves, rather than to any stimulation of the hematopoietic system. There is no breaking down of the cells of the transfused blood in successful transfusions.

To these observations must be added the clinical results which, in our experience and the experience of others, are satisfactory in transfusions for massive hemorrhage, secondary anemias in preoperative and postoperative patients, thrombocytopenic purpura, infections, ulcerative colitis and bleeding gastric and duodenal ulcers.

# CASE REPORTS

## KEROSENE POISONING\*

C. L. FARABAUGH, M.D.

Owatonna, Minnesota

THE statement that ingestion of kerosene is dangerous and may prove fatal would probably be received with surprise by most persons, including many physicians; yet during the past few years at least 120 hospitalized cases, with five fatalities from this cause, have been reported in medical journals, and from the nature of the cases, and the sources of reports it seems fair to assume that many more have gone unreported.

Clinical and laboratory findings in cases of kerosene poisoning as reported are strikingly uniform. They are chiefly as follows:

1. All fatalities occurred in children ranging in age from 12 to 20 months.
2. All fatalities occurred in from 3 to 48 hours, nearly all in 8 to 18 hours after ingestion of kerosene.
3. All fatal and many non-fatal cases developed typical signs and symptoms of pneumonia.
4. Chief early signs are marked drowsiness or actual coma, cyanosis, occasionally convulsions.
5. High fever, rapid pulse and rapid respiration develop in a few hours.
6. Laboratory findings were not especially significant. Traces of sugar and acetone were present in the urine; leukocytosis, especially in cases with signs of pneumonia.
7. No satisfactory therapy has been devised. Stimulants, such as atropine, caffeine, carbon dioxide, plus gastric lavage or emetics, are suggested, but none seems to be of much value.

The following case report is given in considerable detail because it is almost identical with all cases reported and, therefore, gives an accurate picture of the condition:

### Case Report

The case is that of a female child, one year of age, brought to my office at 6 p. m., April 9, 1931. About an hour previously she had drunk from a glass containing kerosene. At first she seemed unharmed but after about half hour became drowsy. When seen, she was in a comatose condition resembling profound sleep and was slightly cyanotic. Her pulse was strong and not especially rapid. A tube was passed at once and the stomach washed, about two quarts of water being used. Some undigested food and a quantity of kerosene were obtained, the latter in sufficient quantity to collect in drops on the surface of the wash water. Two drams of magnesium sulphate in solution was poured into the stomach and left.

\*Read before the annual meeting of the Southern Minnesota Medical Association, Albert Lea, Minnesota, August 30-31, 1936.

The patient was sent at once to the University Hospital, arriving at 6:45 p. m., one and three-quarters hours after drinking the kerosene. The remainder of the report is taken from the hospital record.

On admission at 6:45 p. m., the patient appeared semicomatose. Pupils reacted to light, but were dilated; respiration, 40; pulse, 160; skin cold and clammy. Gastric lavage was done, the washings having the odor of kerosene. At 6:55 p. m.,  $3\frac{1}{2}$  grains caffeine sodium benzoate were given. At 7:00 p. m., heat was applied to the abdomen and soap suds enema given. At 8:00 p. m., an enema of 2 per cent sodium bicarbonate was given, also mineral oil, 2 ounces in a half ounce of milk by gavage. The patient responded when spoken to; respiration was very rapid; hemoglobin, 81 per cent; leukocytes, 6,300; p. m. n., 26 per cent; lymphocytes, 70 per cent; monocytes 4 per cent; temperature, 106.2; pulse, 160; respiration, 60.

At 3 a. m., April 10, the baby was on the verge of convulsions, the pupils more widely dilated, respiration very rapid and the patient going into spasms when touched. She was very cyanotic. At 3:45 a. m., 20 grains of chloral hydrate and a cold sponge bath were given. At 4:15 a. m., oxygen was started. At 9:00 a. m., physical examination showed bronchial breathing in the left lower chest and dullness over the right base. At 9:45 a. m., an x-ray diagnosis of bronchopneumonia was made. At 10:31 a. m., the baby died—seventeen hours after ingestion of kerosene.

Detailed autopsy report showed all findings to be normal except the following:

1. Acute bilateral bronchopneumonia.
2. Hemorrhagic congestion of large bowel.
3. Cloudy swelling of liver and kidneys.

The following statement is quoted from the autopsy report: "The bronchi were exposed and traced out and showed no obstruction, but were slightly congested."

### Review of Literature

The literature here reviewed includes that available through the "package library" service of the Library of the American Medical Association plus articles and abstracts published in the Journal of the Association since 1931.

In 1926, Barbour<sup>1</sup> reported four cases seen in a six-year period with one fatality. He reported finding traces of sugar in the urine. Following publication of Barbour's report, several fatalities were mentioned in inquiries sent to and published in the "Queries and Minor Notes" section of the Journal of the American Medical Association.

In 1933, Higgins<sup>2</sup> reported in detail a rapidly fatal case with findings practically identical with those given above.

McLean<sup>3</sup> stated, in 1933, "In a local hospital during the past five years there have been seventeen admissions of young children who drank kerosene. There were three deaths and several of the children were acutely ill with high temperatures."

The most extensive and detailed paper noted is that by Waring,<sup>4</sup> who, in 1933, reported twenty-three hospital admissions with two deaths. Waring also reports experimental study on dogs in which death followed

## CASE REPORTS

introduction of kerosene into the trachea but did not follow when it was introduced into the stomach, and concludes that human deaths have been due to inspiration rather than ingestion of kerosene.

Finally, in 1934, Nunn and Martin report sixty-five hospital admissions with six deaths from the effects of kerosene and, in addition, seven cases with two deaths from ingestion of gasoline.

### Comment

From the scattered sources of reports it seems logical to assume that only a small percentage of kerosene deaths have come to publication. This seems the more likely to be true in view of the extremely short duration of these cases, and the consequent probability that many such cases remained in the care of busy family physicians who have not published their records.

Since no effective therapy is available the only means by which these deaths may be avoided seems to be to inform the public of the existence of the menace and the need for care in protecting children from access to this substance, and of the potential danger from its still widespread use as a "household remedy" in colds and croup.

The assumption that kerosene deaths are produced by inspiration rather than by ingestion of kerosene is logical but unproved. It is, however, not pertinent to the problem, the main point being to recognize the danger and attempt to avoid it.

An interesting sidelight was furnished by a story told the author by a farmer living at Hamel, Minn. This man had been repairing a kerosene motor and left a pail of kerosene standing in the barnyard. A cow drank from the pail, taking approximately a gallon of the kerosene. After drinking she raised her head, looked about in a dazed manner, staggered a few steps backward, fell, and died a few minutes later. The carcass was removed some distance and left to be buried next day. During the night a dog belonging to the farmer ate of the carcass and was found dead beside it next morning.

### Summary

1. Kerosene is a dangerous poison which produces quick death when ingested by young children.
2. All patients in reported fatal cases died of pneumonia.
3. Where ages were given, fatal cases were in children from twelve to twenty months of age.
4. Deaths occurred in from three to forty-eight hours after ingestion of kerosene.
5. Laboratory study yields no significant information.
6. The assumption that pneumonia is due to inspiration of kerosene, though reasonable, is not satisfactorily substantiated.
7. No means are available for preventing deaths from ingestion of kerosene except education of parents as to the danger.

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## ARTIFICIAL FEVER IN THE TREATMENT OF MENINGOCOCCUS INFECTION\*

ERLING S. PLATOU, M.D.

EUGENE McELMEEL, M.D.

ALBERT STOESSER, M.D.

Minneapolis

THE view that heat has a remedial effect on certain disease processes in the body dates back, according to Neyman,<sup>1</sup> to early sixteenth century attempts to cure syphilis. The introduction of malaria in the therapy of neurosyphilis by von Jauregg<sup>2</sup> in 1918 greatly stimulated interest in the use of fever as a therapeutic agent in infectious states.

Although the temperature elevations occasioned by foreign protein injections may have occasionally caused benefit, the development of improved physical means for producing accurately controlled and sustained fever brought about real renewed hope in the effective application of this agent.

Fever, either alone or as an adjunct, has, of course, been most successful in those infections whose causative organisms are especially susceptible to heat. Obviously, if the thermal death point of a pathogenic organism is lower than that of surrounding tissue cells fever therapy can produce a selective beneficial effect. Boak, Carpenter and Warren<sup>3</sup> have established the thermal death time in vitro of a number of organisms at temperatures of 41° and 42° C. (105.8° to 107.6° F.) and have demonstrated that the *Spirocheta pallidum* and the gonococcus are among the most thermo-labile.

Sheard<sup>4</sup> has shown experimentally that thermal changes are different in various tissues following systemic application of radiotherapy. Muscle tissue is affected more than subcutaneous tissue and of those measured the thermal increase is greatest in intra-articular tissue. His experiments indicate the possibility of raising the temperatures, especially of deep and more conductive tissues.

The meningococcus, which resembles the gonococcus in many respects, apparently has an affinity for the blood, for articular surfaces and for the meninges.

The low thermal death point of the meningococcus and its habitat in tissues most affected by systemic fever induction, together with the all too common lethal manifestations of the organism prompted speculation on the possibility of affecting it in vivo by means of heat. The following case afforded an opportunity to witness such a possible effect.

\*From the Department of Pediatrics, University of Minnesota, with the cooperation of Dr. Malcolm Cook, head of the Fever Therapy Department.

## CASE REPORTS

W. D., a white male, three and one-half years old, was admitted to the hospital April 27, 1936, because of ophthalmia, painful joints, fever (103°), stupor and eruption on the face and extremities. A head cold had

pain for a few days. Further cultural studies and agglutination tests of the organism isolated from the patient's blood revealed its true identity as a meningococcus.

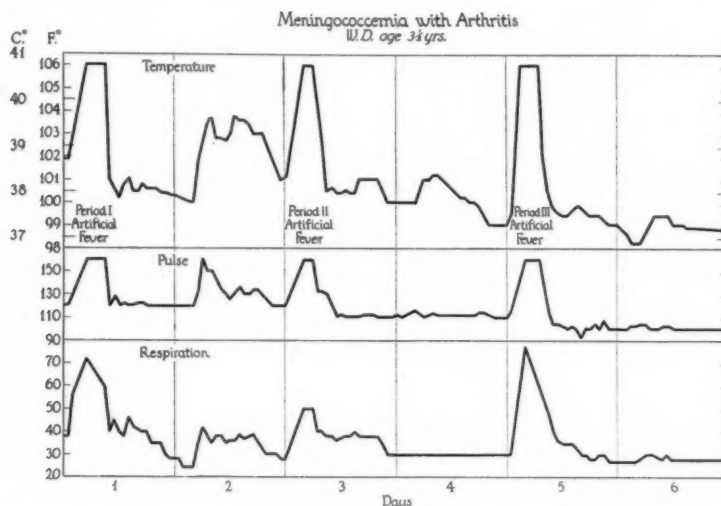


Fig. 1.

preceded these symptoms by one week. On admission the boy appeared very ill. There was profuse mucopurulent discharge and some injection in both eyes, more marked in the right. There was some inflammatory reaction and discharge apparent in the nose and throat. The ears, lungs, heart and abdomen were essentially negative. The extremities showed tender, swollen carpalphalangeal and interphalangeal joints on the left and tenderness in the right wrist. The right knee was tender and pain was extreme on attempted motion. The left great toe became swollen and tender on the second day. The skin of the face, buttocks and extremities was covered with many dark red, maculopapular lesions that could be felt on palpation but were not hard. A few were petechial and did not blanch on pressure. Although there was apparently no involvement of the nervous system at this time, he developed attacks of unconsciousness on the third day, associated with twitching of the right hand and left leg. No neck rigidity or signs of meningeal irritation developed. Laboratory findings—Hgb. 50 per cent, w.b.c. 18,650, Diff.: p.m.n. 66 per cent Lymph. 34 per cent, Mono, 0. X-ray of the chest and a six foot plate of the heart were negative. The urine was negative. Eye smears showed Gram-negative intra- and extracellular diplococci morphologically resembling gonococci. The blood culture was first reported to be a "probable gonococcus."

Further cultural investigation of the organism was requested and the boy was subjected to artificial fever of 106.5° for a period of nine to ten hours on each of three succeeding days, as illustrated in the accompanying chart. He made a very prompt recovery and has remained well since, except for slight residual joint

Three days following this boy's recovery his two-year-old sister was admitted with symptoms of meningitis, and meningococci were found in her spinal fluid. These organisms were definitely agglutinated by the serum of her brother's blood in dilutions of 1-320 and slightly so at 1-640. His serum also agglutinated meningococci recovered from an unrelated case of meningitis. Massive intravenous therapy with meningococcus antitoxin effected a complete recovery in the case of the girl.

The observations in the above reported case, together with the knowledge that the thermolabile meningococcus, which tends to involve tissues that are relatively more affected by systemic heat, has opened the question of whether or not fever may be an effective adjunct in combating epidemic meningitis. Controlled studies are now in progress to determine whether this preliminary observation may confirm such a conjecture.

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## CLINICAL PATHOLOGIC SEMINAR

Conducted by E. T. BELL, M.D.

Department of Pathology, University of Minnesota

Minneapolis

### Multiple Myeloma

*Case 33.*—A woman, sixty-four years old, in the summer of 1935 began to have generalized tired feeling which became progressively worse. In the fall she began to have pain in the back and in the spring of 1936 the pain began to migrate around under the costal margins; she had lost about 30 pounds in weight. Previous history gave negative findings except for cholecystectomy and appendectomy.

On admission, March 25, 1936, her eyes reacted to light, sluggishly; the heart was enlarged to the left, with a systolic murmur at the apex; slight edema of the ankles; a band of verrucous plaques around the waist; normal tendon reflexes.

Urine: specific gravity, 1010; small trace of albumin; otherwise normal. Blood: hemoglobin, 36 per cent; 2,100,000 red cells, 7,800 white cells; normal differential; the red cells showed hypochromasia.

X-ray of the lungs showed bronchitis or upper respiratory infection with possible slight bronchopneumonia. X-ray of the gallbladder was interpreted as showing the gallbladder either diseased or absent. Stomach and duodenal cap showed a normal distribution of barium meal. Spine, pelvis, and shoulder girdle showed nothing except slight hypertrophic arthritis of the lumbar and thoracic spine. The feces showed no blood, ova or parasites. The blood Wassermann reaction was negative. Spinal fluid: cell count, less than 1; Nonne, faint cloud; Wassermann negative; gold curve, 0111100000. Basal metabolic rate, -16. The temperature during the stay in hospital showed uniform rise each afternoon to between 99.5° and 100°. During the stay on hospital about the only clinical objective finding in the patient was pain; there was no disturbance of locomotion; toward the end there was some mental clouding and stupor. Anemia was treated with iron and some liver. On April 6, hemoglobin was 43 per cent; red cells 2,440,000, white cells 5,500; one normoblast was found in the smears; polymorphonuclear granules were toxic; the differential white count was normal.

On May 4 another white count showed 5,800 cells with 46.5 per cent polymorphonuclears, 44.5 per cent lymphocytes; hemoglobin, 48 per cent; no reticulocyte counts were done.

The patient was dismissed on May 17 and readmitted May 18; pulse irregular, lips cyanotic; she was irrational and confused and there was marked dyspnea. Terminal elevation of temperature to 104°. Death, May 20, 3:59 p. m. No definite clinical diagnosis was made.

Postmortem examination. The body was somewhat obese; the subcutaneous fat over the anterior abdominal wall was about 4 cm. in thickness. The pleural, pericardial and peritoneal cavities were normal. Both appendix and gallbladder were absent. The heart weighed 380 grams; the coronary arteries showed only minimal sclerosis; no disease except, perhaps, slight hypertrophy of the left ventricle. The right lung weighed 430 grams, the left, 375 grams; a small amount of bronchopneumonia was demonstrated in the left lower lobe; otherwise the lungs were normal.

The spleen was enlarged, weighing 340 grams. The pulp was firm and dark; no other gross changes.

The liver weighed 1800 grams; it showed no changes except that the parenchyma was decidedly pale. The esophagus, stomach, duodenum and jejuno-ileum showed nothing of note but the mucosa of the entire colon was studded with small, superficial ulcerations, 1 to 2 mm. in diameter; there was no gross blood in the colon. The pancreas showed no changes and the adrenals appeared normal. There was no disease of the kidneys or of the bladder. Both uterine tubes were retort-shaped and somewhat dilated in their distal portions; the ends were sealed off; this appeared to be an old chronic salpingitis of low intensity. The ovaries showed no disease.

The aorta showed a minimal amount of atherosclerosis. The thyroid was somewhat small but of normal consistence. The parathyroids were normal. No disease of any kind was found in the brain. The pituitary gland was normal. There was no disease of the breasts.

The bone marrow of the ribs was pale and fatty.

On section through the first lumbar vertebra it was noted that the spongy part of the bone contained a large number of whitish, soft nodules from 1 to 5 mm. in diameter. Longitudinal section of a rib showed similar whitish nodules in the marrow. There were no large lymph nodes in any part of the body.

Microscopic examination of the vertebra and ribs showed that the whitish nodules were composed of myeloid cells of the plasma cell type; the nodules were composed of compact masses of these plasma cells and there were numerous plasma cells between the masses. The spleen was also infiltrated with plasma cells.

*Comment.*—The bone marrow presents a typical picture of multiple myeloma of the plasma cell type but the infiltration of the spleen with these cells is very unusual in multiple myeloma. The diagnosis is multiple myeloma but the interpretation of plasma cell leukemia is possible.

### Primary Hypertension

*Case 34.*—A man, forty-seven years of age, was admitted to the hospital, April 23, 1936. In January, 1936, he first experienced severe pain in the right flank which was dull in character and situated in the right lumbar region. The pain then became sharp and colicky with some radiation anteriorly to the abdomen and into the groins. Associated with the pain, there was some hematuria and frequency; the patient passed a number of clots of blood. Shortly after this he was examined at the outpatient department. He gave a history of having had high blood pressure for about two years; this was associated with marked headaches in the frontal region and attacks of dizziness.

On admission to the hospital, a furuncle was noted on the left side of the nose. Hemorrhages were noted in the fundi. The lungs showed some dullness laterally and posteriorly over the bases with crepitant rales over the same areas; there was normal tactile fremitus. Blood pressure, 230/134; pulse, 80. Slight enlargement of the left ventricle was noted and a systolic murmur was heard over the apex. The abdominal examination revealed no positive findings. Hemoglobin 62

per cent; red blood cells 3,400,000, white cells 8,800; polymorphonuclears 88 per cent; lymphocytes 20 per cent. On May 7, nonprotein nitrogen was 103.4 mg.; May 19, it was 262.5 mg.

The patient became restless and apprehensive and had some difficulty in breathing; mucus collected in the respiratory passages so that frequent aspirations were necessary. He became totally disoriented, developed dyspnea, cyanosis and orthopnea in marked degrees. He became unconscious on May 19, and died on May 20. Intravenous urography, on May 2, showed no dye entering either pelvis.

**Postmortem examination:** There was no edema; about 500 c.c. of clear fluid in the peritoneal cavity; about 1000 c.c. of clear fluid in each pleural cavity; the pericardial cavity contained a small amount of fibrinopurulent exudate. The heart weighed 585 grams; it showed marked hypertrophy and dilation of the left ventricle; no disease of the valves or of the coronary arteries.

The right lung weighed 750 grams, the left 550 grams; rather extensive bronchopneumonia was found in the dependent portions of the lower lobes, especially the right. The spleen weighed 160 grams and showed definite chronic passive congestion. The liver weighed 2000 grams and showed moderate chronic passive congestion. The adrenal glands were entirely normal. There was no disease of the gallbladder, gastro-intestinal tract or pancreas.

The right kidney weighed 105 grams, the left 110 grams. The surfaces were fairly smooth. On section, cortices were studded with pale and hemorrhagic areas. The bladder and genital organs were normal. The aorta showed atherosclerosis about grade 2. The brain was not examined.

Microscopic examination of the kidneys showed marked involvement of all the small arteries and arterioles; these vessels were extremely narrowed because of intimal thickening of the fibrous type; the appearances were typical of hypertension with renal insufficiency (the so-called malignant hypertension).

**Comment.**—This is a fairly typical case of primary hypertension which had been present two years or more and terminated in a rapidly developing uremia. It is to be distinguished from chronic glomerulonephritis.

#### Acute Gangrenous Pancreatitis

**Case 35.**—The case is that of a man, forty-five years old, who, about May 22, 1936, had an acute attack of pain, accompanied by nausea but no vomiting. The pain was across the upper abdomen, later localized in the right upper quadrant. Enema and icebag gave relief. Later in the day the pain returned; he was given a hypo with some relief and sent to hospital. He had had similar attacks but not so severe; had been told by a doctor that he had gall and kidney stones. He had occasional burning pain in the epigastrium.

On May 22, he entered the hospital at 10 p. m. by ambulance. Temperature was 98°; pulse, 90; respirations, 20. He was unable to void. He was given a low enema and icebag; following the use of the icebag, in five minutes, he experienced nausea with a small emesis. There was boardlike rigidity across the upper abdomen and down to the umbilicus with some tenderness to pressure in the left upper quadrant; markedly tender at McBurney's point. Immediate operation was done; gallbladder and appendix removed; the gallbladder showed advanced chronic cholecystitis with about fifteen fairly large stones and some smaller ones. He received the usual postoperative care with nasal suction, glucose 5 per cent, intravenous-

ly, but on the second day became restless and vomited; temperature was 99.2° to 100° by axilla. He perspired profusely, almost constantly. On the third day, the first specimen of urine showed albumin, +++; 2 to 5 hyaline and 1 to 4 granular casts per low power field; 2 to 6 red blood cells per high power field. Blood urea, 53.2 mg.

He complained of a feeling of fullness in his stomach and slight pain. The next day he complained of backache, grew very drowsy and slept soundly. He continued to complain of a feeling of fullness, was tired and drowsy, vomited greenish fluid on the 27th. On the 28th he became delirious; pulse, 120; respirations labored; very drowsy but restless. By evening he was stuporous or irrational. On the 29th, the blood urea was 142 mg.; creatinin, 8.8 mg.; temperature going to 102°. From this time he was irrational part of the time, drowsy part of the time, with some nausea. On May 30 there was some twitching of the muscles of the face, arms and legs. Pulse was 128 and irregular. On May 31, there were twitches all over the body; nausea; temperature, 103°; blood pressure, 130/98. Vomitus smelled of urine. He was given coramin, morphin and pituitrin with glucose intravenously and almost constant nasal suction. On June 1, the pulse went down to 88; respirations, 20; temperature, 103.4°; Cheyne-Stokes respiration. Death occurred at 9:20 a. m., June 1.

**Postmortem examination:** There was no edema or jaundice; recent right rectus incision, partially open and draining. Peritoneal cavity contained 300 c.c. of cloudy purulent fluid; all of the peritoneal surfaces, where adipose tissue was present, were studded with small areas of fat necrosis, up to 5 mm. in diameter. There was no disease of the heart, lungs or spleen. The liver weighed 1700 grams and had a normal color; the bile ducts were all patent and there was no dilation; the gallbladder was absent; there were stones in the cystic duct. The gastro-intestinal tract showed no disease.

The pancreas was enlarged and grayish black; for the most part it was gangrenous; there were numerous large areas of fat necrosis about the pancreas. The pancreatic duct opened in a common chamber at the ampulla with the common bile duct but no stones were found in this region and the common bile duct was not distended. The kidneys and bladder were normal. Microscopically, the kidneys were normal.

**Diagnosis:** acute gangrenous pancreatitis with general peritonitis.

**Comment.**—Acute pancreatitis of this type is associated with cholelithiasis in a majority of cases. Apparently, the symptoms from the beginning of the illness were due to the pancreatitis and not to the gallbladder.

One theory of the origin of acute pancreatitis is that a gallstone is lodged in the ampulla and this results in forcing bile up into the pancreatic duct, causing pancreatitis. This theory accounts for the frequent association of gallstones with pancreatitis. However, in most instances, nothing is found at postmortem to prove that a stone did lodge in the ampulla. It is conceivable that stones might lodge temporarily and cause diversion of bile into the pancreatic duct and finally be passed into the duodenum.

#### Influenzal Meningitis

**Case 36.**—A baby girl, sixteen months of age, was admitted to the hospital on June 9, 1936. She had been well until June 7, when she vomited several times and became very drowsy. On June 8, the drowsiness per-

## CLINICAL PATHOLOGIC SEMINAR

sisted; a physician was called, who observed stiffness of the neck; the child objected to being picked up. Spinal puncture on this date showed a cloudy spinal fluid.

On admission, June 9, the child was well nourished and lay quietly in bed with closed eyes; neck rigid; anterior fontanel tense; pharynx reddened; Kernig sign positive. The urine showed no abnormality. Blood; hemoglobin, 100 per cent; white cells, 42,000; polymorphonuclears, 85 per cent, lymphocytes, 15 per cent. Spinal fluid, June 9, showed 8000 cells per cubic millimeter of which 90 per cent were polymorphonuclears and 10 per cent, mononuclears. On June 10, 6,800 cells, with 81 per cent polymorphonuclears; on June 11, 8,300 cells with 86 per cent polymorphonuclears. Smears showed small Gram-negative pleomorphic organisms in coccoid and rod shapes, the organisms being identified in smears of the spinal fluid and also in cultures. These were recognized as influenza bacilli. The organisms were grown in culture and found to be influenza bacilli; they were aggluti-

nated with anti-influenza serum. Anti-influenza serum was given intraspinally and intravenously. On June 12, no spinal fluid could be obtained by lumbar puncture; cisternal puncture was made and a small amount of fluid was obtained. The patient became cyanotic, respiration slow and labored. Oxygen failed to relieve the cyanosis. Death occurred, June 13.

Postmortem: No disease was found in any of the organs in the thorax or abdomen. Upon removing the dura mater, a greenish rather thick layer of fibrinopurulent exudate was found, covering the greater part of the cerebellum and the bulbar portion of the spinal cord.

Diagnosis: Influenza meningitis.

Comment.—Meningitis due to the bacillus of influenza can be distinguished from meningococcal meningitis only by identification of the organisms in the spinal fluid. Frequently this disease is not preceded by an upper respiratory infection.

### The Nomenclature of "Male Hormones"

The Council on Pharmacy and Chemistry reports that the investigations on the male hormones have advanced to the point at which three chemically pure substances have been obtained from urine and testis tissue; a number of related compounds have been obtained by modifying these substances or by synthetic degradation studies on the sterols and bile acids. The physiologic potencies of the naturally occurring compounds and of some of the other substances have been determined. On the recommendation of the Advisory Committee on the Nomenclature of Endocrine Principles, the Council on Pharmacy and Chemistry adopted the following terms: (a) *Androsterone* to designate the chemically pure hormone  $C_{19}H_{28}O_2$ , melting point 178 C., obtained from urine (International unit 100 micrograms as assayed by comb growth response in the capon). (b) *Dehydro-androsterone* to designate the chemically pure hormone  $C_{19}H_{26}O_2$ , melting point 148 C., obtained from urine (capon unit approximately five times the dose of androsterone). (c) *Testosterone* to designate the chemically pure hormone  $C_{19}H_{28}O_2$ , melting point 154 C., obtained from testis tissue (capon unit from one-tenth to one-sixth the dose of androsterone). (d) *Androgen* to designate substances possessing masculinizing activity. Urinary androgens, testicular androgens or androgenic substances from plant or other sources may or may not contain androsterone, dehydro-androsterone or testosterone. Although the international unit is based on comb growth response in capons, it should be emphasized that this method of assay does not necessarily express the quantitative physiologic activities of different preparations on mammals. Therefore it is highly desirable to determine the physiologic activities of new pure or crude preparations by assays on mammals as well.—(J.A.M.A., July 18, 1936, p. 210.)

### The Nomenclature of Estrus-Producing Compounds

The Council on Pharmacy and Chemistry reports that there are at least seven naturally occurring estrogenic substances that have been isolated in a crystalline condition. As the result of investigations by Butenandt, Cook, Doisy, Marrian and their respective associates the structure of these and related compounds has been definitely established. Two systems of nomenclature have been proposed: one by Girard using the root "folli-" with suffixes to indicate the nature of the compounds; the other by Adam and his collaborators using the root "oestr-" with certain modifications. In view of the importance of Edgar Allen's investigations in opening up the field of the follicular hormone and of Doisy's contributions in isolating the first crystalline estrus-producing compound and the further fact that the Council has approved theelin as a common name, the Advisory Committee on the Nomenclature of Endocrine Principles considered a proposal to retain "theel-" as the root for the names of the estrus-producing compounds. However, in view of the fact that the system of nomenclature devised by Adam and his collaborators has been fairly widely adopted among investigators, it appeared inadvisable to supplant this system even though the new system based on "theel-" was simpler and more nearly in accord with the nomenclature for the androgens. Accordingly, the Council, on the recommendation of the Advisory Committee on the Nomenclature of Endocrine Principles, decided (1) to adopt the system of nomenclature based on the root *estr-*; (2) to retain *theelin*, *theolol* and *dihydrotheelin* as synonyms for the compounds known in the aforementioned system as *estrone*, *estriol* and *estradiol* respectively; and (3) to adopt the term *estrogenic* to describe those compounds or extracts which in addition to their other physiologic properties produce estrus, and to adopt the noun *estrogen* as the collective term for all the substances having these properties. (J.A.M.A., Oct. 10, 1936, p. 1331.)

## EDITORIAL

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#### BUSINESS MANAGER

J. R. BRUCE, Saint Paul

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### Center For Continuation at the University of Minnesota

THE dedication conference of the Center for Continuation Study of the University was held November 13 and 14, with an appropriate program participated in by faculty and guest speakers. We are indebted to President Coffman, as the plan for the Center is due to his conception that the University should foster training facilities for leaders and members of the professions throughout the state. The formation of this Center is the result of the recognition of the educational duty and privileges of the State University toward members of such groups which may be licensed by the state and which may or may not be alumni of the University. It, in no way, replaces but supplements

the training offered by the General Extension Division of the University, of which Dr. R. R. Price is the director.

The building is a worthy addition to the campus. Funds for its construction were supplied in part by the Federal Public Works administration. It contains very adequate living quarters and conference rooms and these facilities should aid in the effectiveness of refresher courses that are necessarily limited in duration. Particular benefit would seem to accrue to the medical profession. Periodic attendance upon courses planned to cover newer developments will enable practicing physicians to keep abreast with current medical progress right at the University. Dean Diehl is greatly interested in the formulation of plans for courses at the Center, the first of which will be held early in 1937. Further details will be available later.

Professor Harold S. Benjamin is Director of the Center and is thoroughly competent to aid in the execution of the plans for the various groups. The project may be called unique and exemplifies an added conception of the educational privileges of the University to the citizens of the state, particularly its leaders and professional members. The open-minded approach and the dependence upon actual working experience for future guidance speaks for its success.

C. A. McK.

### Collection Agencies

FROM time to time it seems necessary to warn the profession against one type of parasite which seems endemic and to which the profession seems especially susceptible. We refer to a certain type of collection agency.

Doctors have various attitudes toward the problem of collecting bad accounts. Some take the course of the fisherman who when he hooks a bullhead cuts the line and forgets the incident. Others have their own individualistic methods of writing a note or letter to the delinquent, with varying results, while still others utilize collection agencies.

An agent for some local or distant collection agency approaches a doctor and verbally recites



the terms of a contract between the doctor and the agency whereby the agency subtracts a certain percentage from the amount collected for service rendered. The agent assures the doctor that no high pressure methods will be used and that collections will be remitted promptly. A number of accounts are listed and turned over to the agent, the doctor signing on the dotted line and perhaps not giving the printed terms of the contract careful scrutiny.

A few months elapse and nothing has been heard from the collection agency except that complaints as to the methods of the agency have directly or indirectly reached the doctor's ears. An inquiry directed to the agency brings the information that the agency is entitled, according to the signed contract, to its commission on the entire amount of the accounts listed before remittances to the doctor are due and that the doctor is still indebted to the agency for a certain sum. Regretting the apparent misunderstanding, the agency kindly offers to accept a number of additional accounts at no extra charge so that remittances may be forthcoming. The doctor has sold his accounts and is helpless.

A perusal of one of these contracts recently submitted to MINNESOTA MEDICINE shows it to have been ambiguously worded and only a legal expert could determine what recourse the victim has.

A doctor should refrain from employing a collection agency about which he knows nothing. Only an agency employed by some other doctor and one that has proved its reliability should be patronized. The importance of carefully studying a contract before it is signed and not taking the agent's glib assurances cannot be too strongly emphasized.

#### American Medical Editors and Authors Association

A DOCTOR is frequently invited to join organizations of one type or another and is at a loss to decide whether to join or not. Some are natural joiners and will join everything that comes along, from a new medical association to a golf club a thousand miles distant.

Renewed activity on the part of the American Medical Editors and Authors Association for the purpose of adding new members has doubtless

raised the question in the minds of many as to the advisability of joining. Each individual must, of course, decide for himself, but it is always advisable to inquire whether the returns from membership in any organization justify the amount spent for dues.

Many years ago an association of medical editors was formed but died a natural death after a brief existence. Presumably there was little need for such an association. The editors of state medical journals meet each year in Chicago with the secretaries of the state associations for the discussion of common problems and interests. When, a few years ago, the proposal to form an association of editors of state journals was made, the proposition was turned down as an additional useless organization.

A number of years ago, the American Medical Editors and Authors Association was formed. Its membership was not particularly exclusive, as doctors who had merely published a single case report were invited to join. The attempt of the organization to speak for the profession on economic and legislative problems, thus usurping the prerogatives of our national organization, met with disapproval.\*

Recently, the organization has become more active under a new director. Its declared purpose is to bring medical authors into closer relationship with publishers; to assist in preparing medical papers; to uncover medical literary genius. Through its agency, the services of the library of the New York Academy of Medicine will be made available to doctors without charge beyond the usual fee charged by the library. Submitted articles will be put into proper shape for publication and submitted to journals in the neighborhood.

Does a medical author need the services of such an organization? We doubt it. The libraries of the American Medical Association, Surgeon General's office, and New York Academy of Medicine are available to any doctor without the necessity of an intermediary. Although writing is difficult for the majority of doctors, any member of the profession who has an idea or experience worth reporting does not have much difficulty in getting into print. The opposite is most likely true—that much that

\*Medical Organizations Old and New. Jour. Am. Med. Assn., 97:932, (Sept. 26) 1931.

## OF GENERAL INTEREST

appears in print is mere repetition. Most editors are only too willing to assist medical authors in preparing manuscripts for publication, but after all, if a doctor affixes his name to a paper it should represent his effort and not that of someone else. If all one is likely to get by joining an authors' organization is a membership certificate, we would strongly recommend the spending of a less amount in the purchase of an inexpensive manual† on the writing of medical papers, an investment which would bring a very decided return to any author.

## OF GENERAL INTEREST

**Dr. I. L. Mitby**, formerly with the Faribault Clinic, is now associated with the Rude Clinic at Hibbing, Minnesota.

\* \* \*

**Dr. and Mrs. E. P. Lyon** were honor guests at a dinner given by members of the faculty of the school of nursing of the University of Minnesota, Thursday, November 19, at the Curtis Hotel, Minneapolis.

\* \* \*

The national award for the best program presented in the United States on national hospital day last May was made to the Wesley Hospital of Wadena, Minnesota. Presentation was made recently by Dr. A. F. Branton, president of the Minnesota Hospital Association, to Miss Madell Motsiff, superintendent of Wesley Hospital.

\* \* \*

**Dr. W. C. Jump**, a graduate of the Medical School of the University of Minnesota in 1932, has opened offices for practice at Madison Lake, Minnesota. He practiced in Houghton, Michigan, following his graduation and from there went to Pontiac, Michigan, where he was located before coming to Madison Lake.

\* \* \*

**Sympathy is extended** to Dr. Horatio B. Sweetser, Sr., of Minneapolis, and his two sons, Dr. Theodore H. Sweetser and Dr. H. B. Sweetser, Jr., in their recent bereavement. Mrs. H. B. Sweetser, Sr., passed away on November 17. She had long been interested in welfare work in Minneapolis and was at one time president of the Women's Auxiliary of the Minnesota State Medical Association. Besides her husband and two sons, she leaves two daughters, Mrs. F. S. Preston of Minneapolis and Mrs. A. J. Albrecht of Belle Plaine.

†Simmons, George H., and Fishbein, Morris: *The Art and Practice of Medical Writing*. Chicago: A. M. A., 1925.  
Mellish-Wilson, Maud H.: *The Writing of Medical Papers*. Philadelphia: W. B. Saunders, 1929.

**Christmas Seals**—Each year the public is asked to buy Christmas seals to be affixed to outgoing mail and each year since the annual sale of seals began thirty years ago there has been a generous response. Proceeds derived from the sale of the seals in our State are used for the support of the Minnesota Public Health Association and all but 5 per cent of the fund raised is spent in the activities of the Association in the state, for the most part in combating tuberculosis. Five per cent of the amount collected is sent to the National Tuberculosis Association. Although there has been a gratifying fall in the incidence and death rate from tuberculosis in recent years, some 70,000 individuals, half of whom are from fifteen to forty-five years of age, still die in a year from tuberculosis. The need for continuation of the seal sale is still evident.

\* \* \*

**Surgery** is the name of a new journal to be published beginning in January, 1937, as a monthly publication devoted to the art and science of surgery. The journal will be published by the C. V. Mosby Company of St. Louis under the editorship of Dr. Alton Ochsner of New Orleans and Dr. Owen H. Wangenstein of Minneapolis. Associate Editors are Dr. Alfred Blalock of Nashville and Dr. William F. Rienhoff of Baltimore. Minnesota surgeons and physicians serving on the Council, Editorial Board and Committee on Publications are: *Advisory Council*—Dr. Donald C. Balfour, Rochester; *Editorial Board*—Dr. Ralph K. Ghormley, Rochester; *Committee on Publications*—Dr. E. T. Bell, Dr. Charles D. Creevy and Dr. Leo G. Rigler, Minneapolis; Dr. Albert C. Broders, Dr. Louis A. Buie, Dr. Harold I. Lillie, Dr. John S. Lundy, Dr. Frank C. Mann and Dr. Charles W. Mayo, Rochester. The purpose of this new publication will be the prompt publication of new and worthwhile surgical papers. It will also review all important surgical meetings held in all parts of the world. No abstracts will be published nor will *Surgery* be the official publication of any surgical organization.

\* \* \*

**At the close** of the last academic year, Dr. E. P. Lyon, Dean of the Medical School, retired from active service at the University of Minnesota. During his administration, covering a period of twenty-three years, the Medical School exhibited steady and continued growth. As a fitting tribute to his stimulating leadership, the alumni and faculty of the Medical School proposed to establish in his honor the Elias Potter Lyon Medical Lectureship in Medicine at the University, the fund for this purpose to be raised through subscriptions by alumni, faculty, students, and friends. The response to this proposal has been enthusiastic and generous. Anyone who welcomes the opportunity of contributing to the Lyon Lectureship fund before the project is closed may send his donation to the Office of the Comptroller of the University of Minnesota.

## In Memoriam

**Frederick Alexander Erb**  
1873-1936

ON the beautiful Sunday morning of October 25, 1936, as the church bells were calling many to early worship, death took one of the most valued members of the medical profession of Minneapolis.

Dr. Frederick A. Erb was born in Minneapolis, July 5, 1873, the son of Mr. and Mrs. Alexander Erb, who came to America from Baden, Germany, in 1858.

He received his entire education in Minneapolis. He was a member of the first class graduated from East High School. He spent two years in academic work at the University of Minnesota in preparation for the Medical School from which he was graduated in 1902. He was a member of the Sigma Chi and Nu Sigma Nu fraternities.

In 1905, he married Miss Jessie M. Cribb of Milwaukee, who with one daughter, Mrs. Donald Grandin of Minneapolis, and three sons, George, of San Francisco, Frederick and John of Minneapolis, survive him.

Dr. Erb practiced medicine in Minneapolis for thirty-four years. He was one of that group of modest men who, though fully qualified to go into the practice of special branches of medicine, remained simply a "family doctor."

During all the years of his professional career, he was an active member of the Hennepin County Medical Society. He was president of the Society in 1926, chairman of the Executive Committee in 1927, vice chairman of the Local Committee on Arrangements for the American Medical Association meeting in Minneapolis in 1928, and chairman of the Building Committee in 1929. At the time of his death he was a member of the Society's Board of Trustees and Board of Censors.

He was also active for many years in the tuberculosis work of Minneapolis and Hennepin County. He served as president of the Hennepin County Tuberculosis Association from 1933 until his death. Previous to that he had served for a number of years on the Association's Executive Committee and for a longer period, as a member of its Board of Directors.

Dr. Erb was always interested in those services of the Tuberculosis Association which give to Minneapolis and Hennepin County physicians in private practice, aid in their diagnosis and treatment of tuberculosis. During his administration, and largely because of this interest, the Tuberculin Service for Physicians was established. The Bulletin which accompanies the deliveries of the tuberculin was also one of the ideas which he fostered and in which he took a keen interest.

The John W. Bell Tuberculosis Lectureship in the Hennepin County Medical Society and the Richard Olding Beard Tuberculosis Lectureship in the Third District Nurses Association were established during his tenure of office.

The health educational work during his administration, especially in the schools, made marked advances.

The most recent development and one which he had long advocated, is the new x-ray service for private patients who are unable to pay for their x-rays.

In no period in the history of the Hennepin County Tuberculosis Association has more substantial progress in the fight to control tuberculosis been made than during the years Dr. Erb served as the Association's president. He was loved and esteemed by all with whom he worked—the Board of Directors, the Executive Committee, and the Staff. All felt an irreparable loss in his sudden and untimely death. The high regard in which Dr. Erb was held by the Hennepin County Tuberculosis Association is, perhaps, best expressed in the resolution passed by the Association:

"The Hennepin County Tuberculosis Association has lost a staunch and vigorous leader in Dr. Frederick A. Erb, who for many years has given unstintingly of his time, energy and outstanding capabilities, in its service. He brought to our Association not only his deep personal interest but the good will and support of his wide circle of personal and professional friends.

"During the years of his presidency, 1933, 1934, 1935 and 1936, the members of the Hennepin County Tuberculosis Association have worked unitedly not only to carry forward the public services which were already established, but also to initiate new health projects that he was instrumental in developing, which have since won the Association nation-wide recognition.

"We, who have served on his Executive Committee, have on many occasions appreciated his sound judgment, his unequivocal stand for and his vigorous support of whatever he considered would best serve the public good. We pledge, as a tribute to his splendid leadership, and to those qualities which he exemplified, to carry forward the work in which he was so vitally interested, as he would want it done."

He ignored signs of impending danger to his own health. He chose to continue his daily work rather than surrender and live a life of inactivity, contemplating the inevitable. He died as he wished, suddenly, without premonition, and in the midst of an active, useful life.

Dr. Erb was honored by his colleagues, loved by his patients, and respected and appreciated by the community in which he spent his entire life. He was modest, conscientious, thoughtful, honest, sympathetic and earnest. He was a wise counsellor, a good companion and a loyal friend.

**R. Roy Kennedy**  
1883-1936

DR. R. Roy Kennedy, Minneapolis, died suddenly at his office in the Physicians & Surgeons Building, Saturday, November 7, 1936, at the age of fifty-three.

He was born at Chippewa Falls, Wisconsin. He was graduated from North High School, Minneapolis, and Marquette University Medical School, and began practice in Minneapolis in 1911.

Dr. Kennedy specialized in obstetrics and gynecology and was a member of the Hennepin County Medical Society, the Minnesota State Medical Association and the American Medical Association. Also, he was a member of the staffs of Swedish, St. Mary's and Asbury Hospitals in Minneapolis.

## IN MEMORIAM

Services for Dr. Kennedy were held at Lakewood Chapel on Tuesday, November 10, 1936. Dr. Charles Fox Davis of the Asbury Hospital Association officiated. The pallbearers were Dr. Charles Kistler, Dr. John Gammell, Dr. John E. Hynes, Dr. Alvin Kistler, Dr. Matthew Lynch, and Dr. Harry King.

He is survived by his wife, Mary Ellen; mother, Mrs. William T. Kennedy; brother, Dr. Claude C. Kennedy, of Minneapolis, and a sister, Mrs. Fred Sherman of Dryden, Washington.

Dr. Kennedy practiced in Minneapolis continuously for twenty-five years. He was most devoted to his family and to his patients, giving to both all of his time. He was a man who always thought of others first, being unselfish in all of his dealings. His patients and family miss him sadly.

### Eugene Garfield McKeown 1881-1936

**EUGENE GARFIELD McKEOWN** was born near Elkton, South Dakota, October 10, 1881. Early in his childhood he moved with his parents to Chatfield, Minnesota, where he resided until he entered school at Carleton College, Northfield, Minn. Later he entered the University of Minnesota, where he graduated from the School of Medicine in 1909.

On August 5, 1909, he was united in marriage to Miss Mary E. Burton, at Delhi. She survives him.

Dr. E. G. McKeown started his medical practice in Edgerton, in the summer of 1909, and in 1917 he moved to Pipestone, where he has since practiced. During the World War he was commissioned Assistant Surgeon in the U. S. Navy. For the past eight years he has been Physician-in-Charge at the Pipestone Indian School.

He was a member of Blue Lodge A. F. & A. M., No. 148, Pipestone, Triune Chapter No. 51, Pipestone Commandery No. 38, Calumet Chapter No. 51, O. E. S., Osman Temple of the Shrine, Scottish Rite Bodies, St. Paul Council No. 1. He was Grand Master A. F. & A. M. of Minnesota, 1935, a member of the I. O. O. F., Pipestone, American Legion, Pipestone Civic and Commerce Association, Kiwanis Club, Southwestern Minnesota Medical Society, Minnesota State Medical Association, the Association of American Railway Surgeons, and the Association of Great Northern Railway Surgeons. On November 1, 1935, he was elected a fellow in the American College of Surgeons. He was also first vice president of the Minnesota State Medical Association at the time of his death.

Dr. McKeown was an ardent worker in the various branches of the Masonic lodge, and it was while making a trip to a Commandery meeting at Mankato that death came to him. The news came with the stunning suddenness of a thunderbolt. Hale, hearty, in the prime of his life and career, it seemed unbelievable that his enthusiasm, service, good fellowship had ended, that he would never again mingle with those who were glad to call him friend.

He is survived by his son, Roy, and daughter, Marian, of Pipestone; his parents, Mr. and Mrs. John McKeown, of Chatfield; and six sisters: Mrs. B. G.

Muxlow, of Byron; Eva McKeown, of Wabasha; Mrs. Roy P. Smith, of Flandreau; Dorothy McKeown, St. Paul; Mrs. W. J. Ramthun, Byron, Minnesota; and Martha McKeown, of Evanston, Illinois.

### Joseph Graham Mayo 1902-1936

**T**HE younger son of Dr. and Mrs. Charles H. Mayo, of Rochester, Dr. Joseph Graham Mayo, was the grandson of Dr. William Worrall Mayo, the nephew of Dr. William J. Mayo and, on the maternal side, the nephew of Dr. Christopher Graham. One with such antecedents would be expected to enter the medical profession and the scant decade of Dr. Joseph's professional life was devoted, for the most part, to internal medicine.

Dr. Mayo was born in Rochester, August 31, 1902. He attended schools in Rochester and the Gilman Country School of Baltimore. His collegiate work, begun at Princeton University in 1920, was completed at the State University of Iowa, where he received the degree of Bachelor of Science in 1926 and of Doctor of Medicine in 1927. For a year in 1927 and 1928 he served internship in the Scott and White Hospital of Temple, Texas. He entered The Mayo Foundation as a Fellow in Surgery in 1928 but transferred to medicine in 1930. His postgraduate training of more than four years included also pathology and neurology. In 1934 he was appointed associate in medicine, The Mayo Clinic, and he became consultant in the section on medicine headed by Dr. Lee W. Pollock. In 1936 he received the degree of Master of Science in Medicine from the University of Minnesota. At the time of his death Dr. Mayo was entering on his period of full productivity in medicine. He had written on neurologic, vascular and gastro-intestinal subjects and his patients were devoted to him.

In fact, "Dr. Joe" was liked by everyone, his friendships were numerous and widespread and he was a great out-of-doors man. Fishing, golf, riding and hunting were his avocations and it was while he was returning from a hunting trip that he lost his life. On November 9 he was driving with his dog on a road near Cochrane, Wisconsin, when at a grade crossing the North Coast Limited of the Burlington railroad struck and demolished his automobile.

In 1927, Dr. Mayo married Miss Ruth Rakowsky of Joplin, Missouri. She and two sons, David Graham and William James, respectively six and three years of age, are living. Others who survive Dr. Joseph, besides his parents, are his brother and sisters: Dorothy, Louise (Mrs. George Trenholm), Marilyn, and Dr. Charles William, all of Rochester; Edith (Mrs. Fred W. Rankin) of Lexington, Kentucky, and Esther (Mrs. John Hartzell) of Detroit, Michigan.

Dr. Mayo was a member of the American Medical Association, the Minnesota State Medical Association, the Southern Minnesota Medical Association, the Olmsted-Houston-Fillmore-Dodge County Medical Society, Nu Sigma Nu and Sigma Chi. He was also a Mason.



## Testimonial Dinner to Retiring Members of University Medical School

June 10, 1936

A SIGNIFICANT and memorable occasion in the history of the University of Minnesota occurred on the evening of June 10, 1936, when a testimonial dinner was given in the Minnesota Union in honor of nine distinguished members of the Medical School faculty who were to retire on June 30 because of age. This group of men has played such an important role in the development of this Medical School that their retirement from active service becomes of major historical significance. For this reason the remarks of the evening, informal though most of them were, have been collected and are being published so that they will become a part of the permanent record of medicine and medical education in Minnesota.

### Dr. L. D. Coffman, President of the University of Minnesota, Presiding

While everyone knows that we have met this evening to pay our respects to the nine members of the medical staff who are retiring from active service this year, and while I should be happy to refer more particularly to the character and quality of the service of each of these men, it is not expected that I shall do so. My responsibility at the present time consists of presenting the toastmaster of the evening. I am not quite clear why I should be called upon to perform this pleasant task for the toastmaster is well-known to every person in the audience and he has been an associate and personal friend of the men who are retiring from active service. Nevertheless, there is a feeling that the exercises of the evening will not be properly launched unless the toastmaster is formally presented by the president of the University. I am, therefore, happy to present Dr. Litzenberg, who will now take charge of the meeting.

Following President Coffman's introductory remarks, Dr. Litzenberg introduced the representatives of the departments to which the retiring members of the faculty belonged. These in turn presented the honored guests.

### Dr. Clarence M. Jackson, Professor of Anatomy, Presenting Dr. Charles A. Erdmann, Associate Professor of Anatomy

It is my privilege and pleasure to present my colleague, Dr. Charles A. Erdmann. In 1893, just forty-three years ago, he completed the medical course at Minnesota, and was immediately appointed as a member of the anatomical teaching staff of the Medical School. His period of teaching service is even longer, however, for during the three preceding years as medical student he served also as demonstrator in Anatomy. So that Dr. Erdmann has to his credit forty-six years of continuous teaching, which is probably a unique record of faithful and efficient service in this faculty. During this long period he has wit-

nessed and participated in the evolution of the Medical School, almost from its very beginning.

And now he comes to the age of retirement for a well-earned vacation. We extend to him our heartiest greetings and best wishes for a long period of future leisure and enjoyment. According to the poet Goldsmith:

How blest is he who crowns in shades like these  
A youth of labor with an age of ease.

But perhaps a more appropriate sentiment in the case of Dr. Erdmann is the saying of Oliver Wendell Holmes, that it is better to be seventy years young than forty years old.

Dr. Erdmann, we salute you!

### Dr. Owen H. Wangenstein, Professor of Surgery, Presenting Dr. Franklin R. Wright, Associate Professor of Surgery and Director of the Division of Urology

In my day there has never been a more colorful personality attached to the Department of Surgery than that of Dr. Franklin Randolph Wright. He has been a true pedagogue, interested in every detail related to teaching. The affectionate regard in which he is held by his former students attests well the merit of his own pedagogy. How a mind with the broad interests of Dr. Wright could concentrate itself largely upon a restricted surgical field has often intrigued me. As a junior hospital officer, together with other interns and Fellows, I have trailed Dr. Wright about, eager to hear his comment upon whatever he chose to discourse upon and catch the pearls of wisdom as they fell from him. I believe it is to be admitted that Dr. Wright has now and then meandered away from the professed field of his interest, viz., urology, to the broader fields of medicine, education, and life itself, to the delight and betterment of those of us who were privileged to be associated with him. In later years, it has been my pleasure and good fortune to stroll with him arm in arm through the wards and it is a pleasant duty to say here how much I have enjoyed and profited by these occasions. Dr. Wright graduated from this Medical School in 1894, and previously from our Dental School; he became attached to the faculty of the Medical School as Clinical Assistant in 1896. In 1902 he was made Clinical Instructor in Dermatology and Genito-urinary Diseases, which position he held until 1909, at which time he was made Assistant Professor in Genito-urinary Diseases, holding this rank until 1915. At that time he was made Associate Professor of Surgery in charge of the Division of Urology. In 1920, he was made Associate Professor of Urologic Surgery and named Director of the Division of Urology. Dr. Wright was amongst those honored for long service at the special convocation in 1933.

During many years of teaching, which I am certain

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Dr. Wright has thoroughly enjoyed, he has brought to the members of the surgical department the stimulating example of giving to his instruction the best of which he was capable. Dr. Wright has left his mark upon the department which I trust will remain with us for many years to come.

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**Dr. Frederick C. Rodda, Clinical Professor of Pediatrics, Presenting Dr. James T. Christison, Associate Professor of Pediatrics**

Dr. J. T. Christison's connection with the University dates back to the early nineties, so that his service is of long standing.

My first contact with Dr. Christison was in 1912 under the regime of Dr. J. P. Sedgwick. Whereas we now have some forty men doing pediatric work in the Twin Cities and there is a large staff to draw from, in those early days there were only about a half dozen men doing pediatric work. Great demands were made upon their time and the duties of the clinic and teaching were arduous.

However, it is to be noted that Dr. Christison was always most generous in his efforts, willing to fill in during the illness of any of the members and always having time to help and encourage the younger men. This spirit of helpfulness has been a strong characteristic of Dr. Christison's connection with the University.

I think Dr. Christison, on his retirement, will miss the younger men just as much as they will miss him. He will miss some of those brilliantly bizarre answers, which were to be found in the examination papers. He will also miss that annual thriller and speller which Dr. Coffman sends out. This was a letter from the Board of Regents, which came annually, stating that they confirmed his position as Professor of Pediatrics, for the year, with salary, one goose egg.

I trust fate will decree that this added leisure will add much to the happiness of Dr. Christison for many years to come.

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**Dr. S. Marx White, Professor of Medicine, Presenting Dr. James S. Gilfillan, Associate Professor of Medicine**

Dr. James S. Gilfillan was given the degree of M.D. from the University of Minnesota in 1897. He has served as a teacher of clinical medicine in Ancker Hospital, St. Paul. He held appointments as Assistant in Clinical Medicine from 1903 to 1908, Clinical Instructor from 1908 to 1910, Clinical Professor from 1910 to 1913, Assistant Professor of Medicine from 1913 to 1915, and Associate Professor of Medicine from 1915 to 1936, all without salary. He has had a marked influence on students and on the medical life of this northwest because of certain characteristics which I shall attempt to appraise.

His contacts with students and colleagues have been truly enriching because of his profound knowledge of the field to which he has devoted his attention—that of Internal Medicine. A wide reader, with an

unusually retentive memory, he is conversant with the literature and able to draw freely from these sources.

With a clean-cut scientific bent of mind, his ability to sift the wheat from the chaff in diagnosis and treatment gives him a directness with simplicity of approach that sets a standard for other older as well as younger men to strive to attain.

The breadth of his interest and his keenness in observation, with an unusually wide experience in the wards of Ancker Hospital as well as in private practice, has given him intensive knowledge of the borderlands of medicine as it touches related fields of practice. The surgeon and the specialist in more restricted fields learn much because of his acumen.

A characteristic widely known and acclaimed is his uncompromising honesty, both in opinion and in expression. He has never been known to allow any consideration of circumstance or of personal profit to cause him to waver in this regard.

In this connection I should like to recall to memory another of the great and noble members of the St. Paul contingent of teachers in the Medical School, the surgeon, Dr. Alex MacLaren. Both of these men, Dr. Gilfillan and Dr. MacLaren, have been endowed with the ability to draw needed lessons from the limitations of our art and failures in our practice.

Last, but not least, Dr. Gilfillan's teaching and conversation have been salted and peppered, but withal delicately flavored by a sense of humor that makes his leadership delightful and never to be forgotten. I have heard him more widely and often quoted than any of the other stars in our facultative galaxy.

Dr. James S. Gilfillan, wise and subtle teacher and practitioner—gentleman, the savor of your comradeship shall always linger with both your students and your colleagues.

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**Dr. J. C. Litzenberg, Professor of Obstetrics and Gynecology, Presenting Dr. John L. Rothrock, Professor of Obstetrics and Gynecology**

I present to you Dr. John L. Rothrock, Professor of Obstetrics and Gynecology.

Were it not for his own modesty, Dr. Rothrock would tonight be retiring as Chief of the Department, instead of as full Professor.

When the Department of Obstetrics and Gynecology was organized, at the beginning of the second decade of the century, Dr. Rothrock was asked by the administration of the Medical School to head the division of Gynecology in the new department. This he declined to do and again, in 1913, at the reorganization of the Medical School, and after the death of the revered Chief of the Department, Dr. Parks Ritchie, Dr. Rothrock was asked to head the department. Again he declined. This was to all of us in the department a source of great regret because we not only admired his great skill and teaching ability, but we all recognized him as the most learned man in our specialty, in this part of the country.

When the present incumbent was then offered the

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Chiefship, he went to Dr. Rothrock and urged him to reconsider, but he modestly but persistently adhered to his decision. However, with characteristic loyalty he said he would be glad to do anything he could for the department and the Medical School. He was taken at his word and was called upon for much service throughout the long years he has been with us. To say that he performed such service with skill and judgment is to put it very mildly.

Dr. Rothrock not only worked and taught in the Ancker Hospital in St. Paul, but for many years was an active member of the University Hospital staff, where he was an inspiration to students and staff alike.

So I present to you Dr. John L. Rothrock, retiring Professor of Obstetrics and Gynecology. We shall miss him personally, for he has been a great friend. Professionally, we shall miss his wise counsel and sound judgment.

As he retires we bid him Godspeed and gratefully pay tribute to his exceptional skill as an obstetrician and gynecologist, to his great ability as a teacher, and to his constant loyalty to the department and to the Medical School.

### **Dr. Owen H. Wangensteen, Professor of Surgery, Presenting Dr. John T. Rogers, Associate Professor of Surgery**

Dr. John T. Rogers is celebrating this evening a happier event than retirement from active teaching, viz., a wedding in his home.

How surgeons spend their time following retirement has been a matter of great interest to me. You see, I am already looking forward to that day myself. In this country there appears to be no uniform plan. In England, in the main, as far as I have learned, when a man retires from his hospital appointments, he leaves his work altogether. I was told by Mr. Wilkie, now Sir David of Edinburgh, that his predecessor and preceptor, Sir Harold Stiles, had not made his appearance in the hospital since he left a number of years ago, and has busied himself largely with golf. In Germany, on the contrary, men frequently pursue their practices independently or apply themselves to writing.

Man, it has been said, was ordered to earn his bread in the sweat of his brow as a punishment for his disobedience. In the plenitude of divine benevolence man was permitted to repair his fatigue and exhaustion by earth's greatest solace—the blessing of rest and repose—by calm and peaceful sleep which should be the immediate reward of his labor. Undoubtedly in the lives of many medical men, this pleasure is not shared in its full measure until retirement.

An occasion such as this teaches us how much more enduring our missions are than we, and what pleasure and genuine satisfaction there is in the devotion of our lives and interests to lofty purposes. One occasionally hears it said that the only purpose of Life is to live the life that is ours. How much more full is

a life motivated by high ideals and dedicated to a worthy end than one occupied by idle pursuits.

Dr. Rogers, who was a graduate of this Medical School of 1891, first became connected with the faculty of the Medical School in 1895, when he was made Clinical Instructor in Pediatrics, which rank he held until 1897, when he was transferred to the Department of Surgery with the same rank. In 1901, he was made Professor of Clinical Surgery, and held this rank until 1913, when, at the time of the reorganization of the School he was made Assistant Professor of Surgery. He was made Associate Professor of Surgery in 1916 and has held that rank up to the present time. Dr. Rogers also was among those honored for long service at the special convocation given by the University in 1933.

At this time it is a pleasure to acknowledge his long period of useful service to the Department of Surgery and to wish him Godspeed.

### **Dr. S. Marx White, Professor of Medicine, Presenting Dr. Thomas B. Hartzell, Professorial Lecturer in Medicine**

Dr. Thomas B. Hartzell earned the degree of D.D.S. from the University of Minnesota in 1893, and that of M.D. in 1894.

His teaching career began as an undergraduate instructor in histology in 1890. He served as demonstrator in Oral Surgery from 1894 to 1896. From 1896 to 1903 the president's records reveal the reverberating, or perhaps better said reconsonating, title of Professor of Comparative Dental Anatomy and Physical Diagnosis and Oral Surgery. I would call that a mouthful. From 1903 to 1913 Dr. Hartzell calmed down to a professorship in dentistry and in the latter year was made Research Professor in Mouth Infections, and in 1920 Lecturer in the Department of Medicine.

President of the National Dental Association in 1921-1922; member of the Committee on legislation and enrollment of the dental committee, General Medical Board of the Council of National Defense in 1917; member of the medical section of the National Research Council and director of research in Minnesota from the American Dental Association since 1914; as well as research consultant in the Dental Department of the U. S. Bureau of Public Health, Washington, D.C.; his following has been national in scope.

John Hunter in London in 1771 published one of the three most important treatises in the history of dentistry. His work had been preceded by Pierre Fouchard's *Le Chirurgien Dentiste* in 1728 and by Philip Plaff's *Abhandlung von den Zähnen* in 1756. Benjamin Rush in Philadelphia in the later years of that century had a glimpse also of the relationship between dental disorders and more generalized infections, but a century of the development of mechanical perfection in restoration and replacement of the teeth did much to obscure and hide the dental side of these relationships.

It was in this country from 1909 to 1916 that Frank Billings with E. C. Rosenow and others developed our

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knowledge of focal infection from bacteria of the streptococcus-pneumococcus group by way of teeth, tonsils and other portals.

Dr. Hartzell's training in both dentistry and medicine by great good fortune has given him an insight into, and an urge toward, the development of our knowledge of these relationships between dentistry and medicine. For many years I had the privilege of association in the University Hospital with this virile worker and wish to express for medicine the appreciation we all feel for his signal service in further development of that great field in which medicine and dentistry join hands. His work, together with that of other far-seeing investigators, has done much to alter the practice of dentistry all over the world and to bring dentistry and medicine together as related branches of the healing art.

Dr. Thomas B. Hartzell, may I take this occasion to remind you that time and tide wait for no man? Like the proverbial calf when the train speeds by the field in which he is feeding, you may still prefer to scud hightailing across the academic pastures, yet you and I and most of us here must give way to younger men who, it is to be hoped, will not follow too closely in our footsteps.

At that, you are still privileged to have youthfulness of spirit and the forward look.

### Dr. Owen H. Wangenstein, Professor of Surgery, Presenting Dr. Charles H. Mayo, Professor of Surgery

This is indeed a unique occasion in the annals of our School. Should we continue to lose our men at this rate every year, the surgical faculty would soon be decimated.

It is said that one of the functions of the old is to counsel the young. I am wondering, Mr. Toastmaster, whether some mistake has not been made in the real ages of our distinguished colleagues and servants of the University. You will note that not one has exercised this prerogative of primogeniture.

The University long ago realized that in the person of Dr. Charles H. Mayo of Rochester there was a budding genius. The echo of his fame had returned to our very city. In 1919 he was appointed Professor of Surgery and over a period of years has given enthusiastically and freely of himself whenever called upon. Already in 1915, however, Dr. Mayo had been made Professor of Surgery in the Mayo Foundation and in the Graduate School. It is to be freely admitted that, in addition to filling a useful niche as a teacher, his name graced the rolls of the surgical staff as a brilliant ornament, for our distinguished colleague, whom we honor tonight, has become a world citizen. Whether he expressed himself through the medium of the written word in surgical literature or from the lecture platform or the railroad platform, we knew we would have from him some pithy and cogent remarks. One of the very beautiful and exemplary things relating to the brothers Mayo has been the devotion and attachment of one to the other.

It has been more than a fraternal interest, yes, something akin, in each instance, of that of a father's solicitude for his son, a spirit we would all do well to emulate.

To recount here all of the varied activities of Dr. Mayo would be an intensely interesting story. To recite his impressive list of citations, decorations and honorary degrees would confound you. We are all proud that he has been one of the few recipients of an honorary degree from this institution. Together with his brother, Dr. William J. Mayo, he has established the Mayo Foundation for graduate education and research—a lasting monument to the munificence of two philanthropic and public spirited men. The remarkable clinic which they have established at Rochester has no counterpart the world over, and has been the never ceasing wonder of medical men. It is fitting that now when Doctor Mayo becomes Professor of Surgery Emeritus, that we pay tribute to his unusual attainments in diverse fields. His versatility has been as astounding as his accomplishments. "Doctor Charlie," distinguished surgeon, educator, leader in the field of public and community health, citizen of the world, and true gentleman, the University acknowledges with pride and gratitude your years of association with the surgical department. May we continue to have the benefit of your vision and friendly counsel during many years filled with happiness for you!

### Dr. Lotus D. Coffman, President of the University, Presenting Dean Elias P. Lyon, Dean of the Medical School

Now that Dean Lyon is retiring from the active deanship of the Medical School, perhaps I may be permitted to make some remarks about his deanship. What I shall say reveals a side of his character which the members of the medical staff and many of his friends never suspected he possessed. He was so unlike the other deans of the University that it was always a comfort and a pleasure to confer with him, and particularly about budgetary matters and the needs of the Medical School. Instead of asking for large increases in the Medical School budget, he would come in at the close of every year when budgetary matters were under consideration and with face fairly aglow with the spirit of coöperation say, "I have been examining the budget of the Medical School and I found \$50,000 that we won't need this next year, if you can use it to advantage somewhere else in the University." Then he would continue, "I have just had a meeting of the Administrative Committee of the Medical School (a committee, you will recall, which is composed of the heads of the departments of the Medical School) and these gentlemen in a spirit of great magnanimity have declared that they would prefer to have fewer assistants and scholars and fellows next year; and furthermore that they have discovered that the members of the staff of the Medical School love to work simply for the sake of the work, and that not one of them wishes to have his salary increased or to be promoted in rank." You will never



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know what a source of great gratification and pleasure it was to have a dean talk about budgetary matters, promotions and the like, in such a highly professional way. I always felt that the president of the University should not permit a dean to be more magnanimous than he; so that I always replied to Dean Lyon with a grand gesture by saying, "I am sure that the rest of the University would not ask the Medical School to reduce its budget by \$50,000, and I personally should like to see every member of the medical staff promoted and his salary advanced."

The staff never really knew how completely and fully the Dean of the Medical School represented its idealism in his conversations with the President of the University. On the other hand, I can assure you that after the pleasantries of the occasion had been disposed of, none of you will know how tenacious he was in his demands and how insistent he was in declaring that the Medical School is the best school in the University of Minnesota, the best in the Northwest, the best in the United States, and that the members of its staff are the most distinguished and illustrious medical scholars of the world. His eloquence was so persuasive that if the University had suddenly fallen heir to a half million dollars, I should have been disposed to lay it in his lap for the benefit of the Medical School.

In all fairness it must be said that, during his administration of the Medical School, Dean Lyon was never actuated by mean or selfish motives. He was kindly and generous in dealing with others, professional and high-minded in discussing the problems of the Medical School, and friendly to students and staff. In his administrative capacity he kept his face to the future rather than to the past. A scientist in his own right, he knew how to evaluate the scientific efforts of others. Ladies and gentlemen: I am happy to present our friend and neighbor, our associate and colleague, a university dean who administered the affairs of his college with no thought of gain to himself and in a spirit of selflessness which others would do well to emulate, and whose contribution to this University is as enduring as the benefits of medical science are to humanity, Dean Lyon!

### **Dr. Harold S. Diehl, Dean of the Medical Sciences, Presenting Portrait of Dean Elias P. Lyon**

History, whether it be of nations or of institutions, runs along as a continuous, sequential story. Here and there, however, one finds events which, like milestones, tend to divide it into eras or epochs. Such a milestone in the history of the Medical School of the University of Minnesota we are meeting this year in the retirement of Dean Lyon, who has served as its leader faithfully and well over a period covering half of its history.

The year after next we will celebrate the fiftieth anniversary of the founding of our Medical School. Within this brief space of time, even within the memory of many who are present here this evening,

this school has developed from a modest beginning to a place of distinction among the leading medical schools of this country. This development has been no mere chance. On the contrary, it has been the result of the vision and sound leadership of the administrative officers of the University and the School, the loyal and interested support of Regents, alumni and friends; and the conscientious and distinguished service of its faculty.

In this connection possibly a brief résumé of the history of the Medical School would not be amiss.\* In the pioneer days medical education everywhere was largely on a preceptorship basis. When this type of instruction began in Minnesota it is impossible to say. Probably the earliest of the successful practitioners accepted as assistants young men who aspired to the practice of medicine. I had no acquaintance with this period of medical education but it doubtless served its purpose. Acting as groom, coachman, office boy, janitor and general assistant to a busy practitioner probably had some educational value and led to the development of a considerable understanding of human nature. That type of medical education, however, was a long way from our present concept of basing the practice of medicine upon a sound understanding of the human body and of disease processes.

This preceptorship period in medical education was followed by that of the private medical school. The first of these private schools were called Preparatory Medical Schools, the St. Paul Preparatory Medical School opening its doors in 1871 and the Winona Preparatory Medical School in 1872. The stated purpose of these was "the instruction of medical students preparatory to their entering medical college and during the time of their course of study when they were not in attendance upon college lectures or instruction." It was stated also that these schools were to be "considered only as preparatory and auxiliary to the medical college and in no respect a substitute for the same." At this time no medical college existed in the Northwest so students had to go elsewhere, largely to Chicago, for the rest of their medical work.

The first Medical School proper in Minnesota was organized in St. Paul in 1878. This continued for only three years but formed the nucleus of the Minnesota Hospital College in Minneapolis. This school continued, under a slight modification of name, until ten years later, when it gave up its independence to become one of the units from which the University of Minnesota Medical School was developed.

In 1883 a second Medical School was established in Minneapolis. This was called the Minneapolis College of Physicians and Surgeons. This school functioned independently for twelve years, then affiliated with Hamline University to become the Medical Department of that institution. This affiliation continued

\*Historical data based largely upon various papers by Dr. Richard Olding Beard.

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until 1908, when this school also merged with the Medical School of the University.

Both of these medical colleges were situated in Minneapolis. This was too much for St. Paul, so in 1885 a group of St. Paul physicians and surgeons who had been moving spirits in the first St. Paul school organized the St. Paul Medical College. Three years later this group joined with the Minneapolis Hospital College in turning over charters and equipment to the Regents of the University in order that there might be here one strong unified medical school under university direction.

In the archives of Minnesota a legislative act established a College of Medicine at the University in 1882. In reality, however, the University functioned at this time only as an examining body in medicine. That in itself was a forward step in raising the standards of medical education; but the Medical School as we know it today was actually founded in 1888 by the merger of the Minneapolis Hospital College and the St. Paul Medical College. Shortly thereafter the Minneapolis College of Homeopathic Medicine and Surgery gave up its charter in the same manner, and approximately twenty years later the Hamline School joined forces with the rapidly developing medical school of the University. This in brief is the story of the laying of the sound foundation upon which medical education in Minnesota now stands.

The first dean of this new Medical School was Dr. Perry Millard, a vigorous, forward-looking leader. He was in office from 1888 to 1897. These were difficult pioneer days but each year marked definite progress toward a better school.

The second administrative officer was Dr. Parks Ritchie, Professor of Obstetrics and Dean from 1897 to 1906. He engendered loyalty, was loved by all, and led the school to higher planes of educational achievement. During his administration the entrance requirements were raised and the combined six year course leading to the degrees of Bachelor of Science and Doctor of Medicine was inaugurated.

The third administrative officer was Dr. Frank Fairchild Westbrook, professor of pathology, bacteriology and public health, who served as dean from 1906 to 1913. During this period Hamline Medical School was merged with the University; the College of Homeopathic Medicine and Surgery underwent slow disintegration; the fundamental teaching departments were materially strengthened; new buildings known as the Institute of Public Health and Pathology, Millard Hall and the Anatomy building were constructed; the Elliot Memorial Hospital, the first unit of the University Hospital system, was built; the Bachelor of Science degree was required of all medical students before the awarding of the M.D. degree; the first University School of Nursing in the world was established here; and a reorganization of the faculty was undertaken. This latter effort resulted in so much bitterness and dissension that it was years before the school again settled down on a smooth keel. Dr. Westbrook was a distinguished scientist, as

well as a man of "broad vision, strong leadership, sterling integrity, and remarkable team-playing qualities which won for him the respect and cooperation of his fellows. The students of today owe much that they cannot measure to this man whom they did not know, for the position their school has held in the first rank of teaching institutions of medicine in America."

Following the resignation of Dean Westbrook in 1913 Dr. Elias P. Lyon was appointed the fourth Dean of the Medical School. He came into a difficult situation but has steered the school on a steady forward course for twenty-three years. During this period sound policies have been inaugurated, facilities have improved, and the staff strengthened. In the way of material development one might mention the construction of various units of the University hospital—such as the Todd, the Cancer and the Eustis Hospitals, the Out-patient Department, the Health Service, the Nurses' Hall and the Medical Sciences Building. Also of great importance in the development of facilities for clinical teaching has been the building of fine relationships with the Minneapolis General Hospital, the Ancker Hospital of St. Paul, the Gillette State Hospital and Glen Lake Sanatorium. During Dean Lyon's regime also has come the outstanding development in graduate medical education in this country—I refer of course to the affiliation of the Graduate School of the University with the Mayo Foundation. Of singular significance for undergraduate medical education was the inauguration of the policy of building the clinical departments around capable men who are making teaching and research their life work. In this as in other things Dean Lyon has builded soundly and well, with the result that the faculty of our Medical School has never been so strong as it is today.

In the field of medical education Dean Lyon occupies a position of leadership throughout the country. He has had the vision of new horizons and the courage to depart from traditional methods, yet with all has been wisely conservative.

Dean Lyon leaves his footprints in the sands of medical education and his imprint indelibly upon this medical school. This has been sufficient achievement for any man, but to the students who were privileged to know him Dean Lyon's outstanding qualities were those of kindness and personal, human interest. He has always considered the welfare of the student of first importance and has helped many a one over the rough spots in the road to a medical career.

To the members of our Medical School faculty whom we honor this evening, I am privileged to convey the affectionate good wishes of my colleagues and their deep appreciation of your splendid and loyal service to the School, of your unswerving interest and support which shall continue to be an inspiration for those of us who stay to "carry on."

On this occasion it is my privilege to present to the Board of Regents a portrait of Dean Lyon, to be hung in the halls of the institution to which he gave

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the best years of his life. This portrait is presented by the heads of the departments and divisions of the Medical School, and the frame by the School of Nursing.

### Dr. William J. Mayo, Accepting Portrait of Dean Elias P. Lyon on Behalf of the Board of Regents of the University of Minnesota

We meet here this evening to do honor to a man who as head of the University of Minnesota Medical School has rendered distinguished service to the State of Minnesota. When Dr. Elias P. Lyon came to the University twenty-three years ago as Professor of Physiology and Dean of the Medical School, the teaching of medicine at Minnesota was of the clinical type with only moderate scientific background. Today, the Medical School of the University of Minnesota clinically and scientifically is one of the first ten medical schools in America.

Dr. Lyon came to Minnesota a trained physiologist, and physiology is the groundwork of modern medicine because there enter into its study man and all his attributes. In his new field of work as Dean, Dr. Lyon's scientific knowledge and his ability and experience in applying it as scholar and teacher were exceedingly valuable, giving him a fine understanding of the social problems of the public as related to health measures. After long and honorable service, Dean Lyon today becomes Dean Emeritus, leaving for his successor an organization which has few equals for the teaching of medicine.

In accepting this portrait of Dean Lyon on behalf of the President, the Regents, and the faculty of the University of Minnesota, I make grateful acknowledgment of our debt to Dean Lyon. The portrait will be given a place of honor in the gallery where are hung the likenesses of those men and women who have devoted their lives to university work, where it perpetually will encourage and stimulate science and the humanities.

### Dean Elias P. Lyon's Response

*Ave*, Mr. Toastmaster, President Coffman, Ladies and Gentlemen, *Ave*, and shall we add *morituri Salutemur*?

There was a time when I looked upon that phrase, the salutation of the gladiators, as the epitome of pessimism, the deepest depth of degradation of the human spirit. Later I changed my mind. I came to the conclusion that gladiators were too valuable to be killed off indiscriminately. Some of them rose to consequence. My guess is that their occupation was little more dangerous than football, and that they had a good time—got their names in the papers, so to speak! Their salutation to me has no ominous connotation.

However, the phrase seems inappropriate for us oldsters who are about to retire. Perhaps, indeed, some of us would put it oppositely: "We who are about to live, salute you." We ought to have a good

time from now on looking at the show and slyly criticizing the performers. Anyway, I prefer the sententious truth of Maeterlinck, "There are no dead."

The latter phrase should indeed be the motto for teachers. It is their tacit belief that their daily work lives on in their pupils, repeating itself in endless generations; that is their chief inspiration. "No life can be pure in its spirit and strong in its strife and not all life be purer and stronger thereby" was the somewhat florid and verbose way in which the same thought was expressed in a poem I used to read. To name it would mark me as having been a romantic and impressionable youth. I would not wish this fact to get out.

I am proud that I have been a teacher. I am sure that all of us retiring now to the dugout after the best game we knew how to play are proud to have been teachers. For me this choice of profession was made quite early—by the age of twenty certainly, perhaps two or three years earlier. It was chance that determined that most of my years should be spent in medical education, but it was deliberate choice that led me to prepare myself for teaching and engage in teaching as a career.

I think I could make a good case that teaching is the most useful and noble of all the professions. "There are no dead" implies that the influence of all men goes on, reverberating as it were, through all succeeding ages. But the professional teacher meets young and impressionable minds in conscious effort to cut into them an ineffaceable writing. The very nature of this contact must mean that he leaves more behind than the average man of equal ability in some other occupation.

I could argue that teaching is the most satisfying profession. My old chief, Jacques Loeb, used to state that the joy of life comes chiefly from the exercise of the instinct of workmanship. He deplored that for many, perhaps most humans, the instinct of workmanship has to be sacrificed for the more imperative instincts for food, clothing and shelter, and the instinct of procreation.

By the instinct of workmanship or instinct of labor he meant employment at what one likes to do. I often wondered whether for many people this means doing nothing. Perhaps it does. If so, it in no way lessens the truth of Loeb's dictum or the tragedy of its non-fulfillment. It is probably quite as unhappy an experience for some men to give up doing nothing as it is for us who love teaching to give up teaching. But surely we may claim that the satisfaction of this instinct in us is more essential and useful to the world.

At any rate I am convinced that many people fail in the realization of this most precious human possession, the instinct of work; that the world holds many a "mute, inglorious Milton"; that frustration and unhappiness are common. These cannot come to one who teaches and who loves to teach.

I could also make a good case that the teacher is most sure of his livelihood, most free from worry, has more social security, is less crushed by murderous

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competition, has a more sanely spent leisure than almost any other profession. But I leave you to fill in your own thoughts on these matters, for most of you here are teachers.

As to research and teaching, I do not find them such separate and conflicting fields as many seem to think. Indeed I think the researcher who has students around him is perhaps the highest type of teacher. I have indicated on another occasion my deep felt conviction that science lost rather than gained when Loeb quit the university for the research institute. I say integrate research and teaching, but be careful that in enthusiasm for the former the latter does not fall into the background.

Some years ago you, Mr. Toastmaster, read to me a poem. I asked for a copy and have it still in your handwriting. I had it typed and from time to time have passed out copies—one only the other day to Dr. Gortner. It is entitled "Why I Teach."

Because I would be young in soul and mind  
Though years must pass and age my life constrain,  
And I have found no way to lag behind  
The fleeting years, save by the magic chain  
That binds me, youthful, to the youth I love,  
I teach.

Because I would be wise, and wisdom find  
From millions gone before whose torch I pass,  
Still burning bright to light the paths that wind  
So steep and rugged, for each lad and lass  
Slow climbing to the unrevealed above,  
I teach.

Because in passing on the living flame,  
That ever brighter burns the ages through,  
I have done service that is worth the name  
Can I but say "The flame of knowledge grew  
A little brighter in the hands I taught,"  
I teach.

Because I know that when life's end I reach  
And thence pass through the gates so wide and deep  
To what I do not know, save what men TEACH  
That the remembrance of me men will keep  
Is what I've done; and what I have is naught,  
I teach.

(LOUIS BURTON WOODWARD.)

And now I come to that other side of me which perhaps has been more in the view of those who planned this meeting. For I am a double faced man, a teacher and a dean.

My being a dean was as accidental and unplanned as my being in medical education. We who went from the University of Chicago and other schools to the newly formed St. Louis University Medical School in 1904 faced a strange situation. That old University—the oldest in the Mississippi valley—had taken over two recently united proprietary medical colleges, the Marion Sims and the Beaumont. The doctors who controlled these schools drove a hard bargain with the good Jesuit fathers by stipulating that they should retain their chairs for a period of nine years. For that time they were to constitute the faculty and no new members could be added without their consent. The result was that Eycleshymer and Shoemaker in Anatomy, Thompson in Pathology, myself and colleagues in Physiology were members of the University faculty but not of the Faculty of the Medical School in which we taught. It was only after two or three years that we were finally voted into the medical

faculty. Even then we were looked upon with some hostility and suspicion.

In 1907 the dean, a part time clinical man, suddenly resigned. The old time owners of the school constituting a large majority of the faculty claimed that they had the right to name the new dean. The University on the other hand pointed out that this prerogative had not been reserved to the faculty in the transfer. The latter view prevailed and the University authorities declared that one of us fundamental laboratory men—their own appointees—must take the job. The lot fell upon me.

You can imagine the situation. I headed a faculty over whom I had no real jurisdiction. The only bright spot was the whole time laboratory group who like myself were professional teachers. Practically all our efforts had to be put forth in strengthening the fundamental departments. From time to time as death or resignation intervened something could be done on the clinical side. As for the rest it consisted in seeking able young men for subordinate positions and in improving the student body. I came to believe that only on a firm foundation in science and full time teachers in both scientific and practical branches can a medical school be built or do the work for which it exists. I came to know student problems as very real individual human problems that deserve the best human judgment and the sympathy of a god.

I think it was this experience at St. Louis which convinced me that the best progress in human institutions as in the inorganic world is by slow evolution rather than cataclysm. The situation here in 1913 when I inherited a recently completed "reorganization" emphasized the same thought. If any central idea has characterized this administration it has been this of slow growth through evolution. Indeed I think most of our mistakes and difficulties in these twenty-three years have come from occasional bursts of impatience, occasional premature explosions of zeal for rapid realization of ideals.

I commend these thoughts to you who sometimes bewail that progress is slow, who see so much to do, so much untouched: "The petty done, the undone vast." Have patience, build confidence. Someday things will come. Look back to 1913; picture the medical school as embracing Millard Hall and the Institute of Anatomy, each partially completed (as Anatomy is still); of the Elliott Hospital of eighty beds standing remote and alone; of a budget of only \$225,730 for the School. \$79,600 for the Hospital, and keep up your courage.

The second idea characterizing these years probably bases in inherited characteristics of my own personality. I am not a bumptious person, have no over confidence in my own judgment. The result perhaps is that we have been more a coöperative group than might otherwise have been the case. I am proud that on the whole we have worked together. No one can claim any personal glory. This which you celebrate tonight is in no sense a personal show. So far as it represents a review it is of the common heritage of a group who look back on a quarter century of



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united effort. For myself I feel tremendous gratitude to all of you, a group of friends united for an ideal. What has been done we have all done together. That on the whole is better than any one-man triumph, however great it might be.

I am tremendously proud of our young men. Many of them are our own product. We have not been too fearful of the bugaboo of inbreeding. Indeed, why should we when we see that every one of them has added to what we could give him the best that the world afforded in other places? Just now our new head of medicine is away gathering ideas for the new psychopathic institute — an addition, by the way, which we long talked about, worked for and which finally came. Our new dean is one of our boys.

In a talk on one occasion, I characterized the dean as upstander in a circus. The faculty stand on his shoulders and the President is at the top waving a flag. The metaphor fails to express the actual relation of faculty, dean and president, but I was always glad to state that my faculty were soft footed, and did not dig in their toes, and that my presidents were steady on their feet and not given to upsetting the pyramid. I say it again before all of you. It is a notable characteristic of Minnesota.

In other matters the metaphor is pretty good. The dean must have a fairly sturdy pair of legs; must be able to resist some pressure. But resiliency and elasticity are more important than great strength. A little battered but still breathing I am glad now after twenty-nine years of deaning to leave the circus ring and retire to the Valhalla of deans, where the 'lumni "cease from troubling and the weary are at rest."

As for the rest, I may only say that I have had a good life—we all have had a good life together. If the dean has been important, it has been as a sort of universal oiler, an eliminator of friction, a greasing expert. In fact I often call attention to the significant similarity of dean and diener. And I think the best dean I know of was Gunga Din, who you remember was the regimental water bearer.

I think the portrait is fine—almost, one might say, a spittin' likeness. I congratulate Mr. Brewer. In fact, I am thinking of leaving a small endowment to provide an occasional hair-cut. I know in one respect it will be a grand success where I have sometimes failed. It will keep its mouth shut.

However, my innermost thought, as you may infer from what I have said, is that the picture should have been a composite of all of us. Such combination would always create interest, not to say amazement, perhaps consternation. Imagine Dr. Beard's whiskers, Scammon's mustache, my wiry mane, O'Brien's polished dome!

Since this grand idea did not occur to your committee I accept with grateful thanks the more personal honor. Mind you I am not ashamed of my job, but I think it has been only a small part of the much larger

job we have done together. Minnesota's Medical School is a first class institution. It is no one man's monument. It stands for all who have worked here from Millard, first dean, to the last teaching fellow.

Stephen Leacock who recently retired at McGill has written interestingly on "I shall stay in Canada." I shall stay in Minnesota. If I can edge in on something useful to do, I shall be glad. If not, I shall cheer from the ring side when two years from now our beloved school enters upon its second half century.

The King is dead. Oh! Prince of Diehls! Long live the king.

## CHRISTMAS SEAL

The Christmas Seal, which for many years has been offered to the public just preceding the holidays, has rightly come to be associated with the fight against tuberculosis. Although the death rate from the disease has been more than cut in two in the last thirty years tuberculosis continues to be the leading cause of death in young girls and is still a serious problem.

The story of the origin of the Christmas Seal is briefly told in a circular distributed this year by the Mississippi State Board of Health.

It seems that a postal clerk in Copenhagen by the name of Einar Holboell had the ambition to build a hospital for tuberculous children and conceived the idea of an additional and colorful stamp to be affixed to the back of each letter to sell for a penny. Receiving royal approval, funds were first collected by this means in 1904.

In 1907, Miss Emily Bissell of Delaware adopted the seal idea and was the first in this country to raise funds by this means for combating tuberculosis. The Tuberculosis Association then adopted the plan, which has raised an aggregate of \$80,000,000.

## Vapor-Gas

Inquiries have been received by the Bureau of Investigation concerning "Vapor-Gas for Piles," an alleged "scientific remedy" put out by the Vapor-Gas Company of Vining, Minn. According to a leaflet for Vapor-Gas, the product "has never come in contact with a case it did not subdue with immediate relief the first treatment." The same leaflet claims that "These vapors and gasses penetrate every pore of the rectum. It also disinfects every exposed part and removes your troubles immediately—It's not a salve nor a pill—just gas." From an analysis made in the A. M. A. Chemical Laboratory it was concluded that the product consists essentially of a coarse mixture of commercial sodium hydroxide (98.5 per cent) and commercial gelatin (approximately 1.2 per cent). Thus a mixture consisting essentially of caustic soda and gelatin is hailed as a "new and marvelous discovery" and the "vapors" from such a combination are said to constitute a "scientific" treatment of hemorrhoids. The Food and Drugs Act of 1906 has never been adequate to meet this kind of exploitation. (J.A.M.A., Oct. 31, 1936, p. 1488.)

# MEDICAL ECONOMICS

Edited by the Committee on Medical Economics  
of the  
Minnesota State Medical Association

B. J. Branton, M. D.  
L. H. Rutledge, M. D.

W. F. Braasch, M. D., Chairman

J. C. Michael, M. D.  
A. N. Collins, M. D.

## What Can I Do For My County and State Medical Society?

Control of the rapidly expanding field of public health will remain in the hands of the physicians, **ONLY**, if the physicians give it their active coöperation and support.

What are you doing in your county society to coöperate with your local health officials and your local program for the public health?

### Action By The Delegates

The House of Delegates of the Minnesota State Medical Association met in special session at the Saint Paul Hotel, Sunday, November 1: formulated certain important general principles regarded by the delegates and by the medical profession in general to be essential to the delivery of good medical care.

The immediate objective of the meeting: an official recommendation embodying these principles and designed for presentation to the Interim Committee of the legislature. This committee is now embarked upon the final stage of its task, which is to draw up a workable plan coördinating welfare work in Minnesota for submission at the 1937 session of the Legislature.

### Rights of the Sick

The following recommendations, drawn up in the form of answers to a set of pertinent questions sent to delegates and officers prior to the meeting by the Committee on Public Policy and Legislation, were unanimously passed by the delegates.

**Question 1.** Do you believe that the recipient of relief should have the right to select the physician who is to render medical and surgical treatment to him or members of his family?

**Answer.** We recommend that where medical aid is to be rendered to a recipient of relief in any form,

the recipient or his guardian should have the right to choose his own physician.

### Choice of Hospital

**Question 2.** In the event hospitalization is necessary do you believe this right should extend to the selection of the hospital?

**Answer.** We recommend that where local private hospital facilities are available, adequate and practicable, the recipient of relief or his guardian should be allowed his own choice of institution.

### No Action

**Question 3.** The House of Delegates at the last state meeting at Rochester expressed its opinion that the county system of the care of the indigent is preferable to the town system. If the legislature should create a county welfare board in each county do you believe that a physician and surgeon who is duly licensed to practice medicine in the state of Minnesota, and who is a member of the local county or district medical society, should be a member of such county welfare board? (a) In what manner do you believe such physician should be selected? (b) Do you believe that a physician and surgeon who is a member of such a county welfare board should render professional services to the recipient of relief?

**Answer.** We suggest that this body should take no official action on this matter. The first part is controversial and it is not a question that the medical profession is going to be able to settle. It is a question whether the legislature will be able to settle it in this session. So far as a physician going on the board is concerned, we feel that this matter, also, is going to open up altogether too many openings for argument. Therefore, we suggest no action on those thirteen lines.

### Paying the Doctor

**Question 4.** Do you believe that the allowance for professional services should be paid to the recipient of relief or direct to the physician? (a) If the patient is on so-called direct relief? (b) If the patient is on so-called work relief?

**Answer.** We recommend that the allowances for medical services for recipients of relief of any kind should be paid directly to the physician.

**Question 5.** What form of authorization, exclusive of emergency cases, do you believe to be the most satisfactory and practical, taking into consideration: (a) The needs of the patient; (b) the orderly administration of relief; (c) the assured payment of the bill.

**Answer.** We recommend that all forms of authorization for medical relief services shall continue as they are set up at the present time. In other words, the SERA authorization forms which were put into effect by the state some time ago at the request of Dr. Meyerding and this Association, should carry on.

### Opposed to Bidding

**Question 6.** Are you opposed to the so-called practice of "bidding" in the rendering of professional services to the recipients of relief?

**Answer.** We are opposed to the so-called practice of bidding for rendering of medical services, and believe that we should revert to the principle we established in the first article, the right of choice of physician.

**Question 7.** Do you believe that the furnishing of adequate medical and surgical attention to a recipient of relief is of sufficient importance, not only from an economic standpoint but from the point of view of the patient, the taxpayer and the state of Minnesota, to warrant a separate consideration of each case?

**Answer.** Yes.

**Question 8.** Do you believe that occasionally there are individuals in the community who are in need of medical relief, who are not on relief insofar as the other necessities of life are concerned?

**Answer.** Yes.

In addition it was agreed that a definite recognition of the duty of a physician to care for the sick, whether funds are available to pay for the care or not, should be made in the preamble to the statement prepared by the Committee on Public Policy and Legislation. Also an official endorsement of the county medical advisory committee as the logical agency for settlement of difficulties, auditing of bills in the individual counties.

### Presented to the Committee

A communication embodying the above action was prepared by the Committee on Public Policy and Legislation and submitted by Chairman L. L. Sogge early in November to the Interim Committee.

Unofficial reports as this issue went to press were that the action had been favorably received and that the recommendations were being incorporated in substance in the committee's legislative proposals.

DECEMBER, 1936

## The Council Meets

Dr. George Earl of St. Paul was elected chairman of the Council to succeed the late Dr. H. M. Workman who had held the office for many years and who presided over that body for the last time only a month before his death.

Dr. B. J. Branton of Willmar was elected counselor of the third district to fill out Dr. Workman's unexpired term.

The first act of Dr. Earl upon assuming the chair was to call for a moment of silent tribute to his predecessor in office, Dr. Workman.

\* \* \*

Once again the question of the advisability of establishing a uniform fee schedule for welfare work and indigent care all over the state was brought before the Council and disapproved. Fees should be set on a local or district basis, not on a state-wide basis, in the opinion of the Council.

### For Drivers

When the Drivers' License Division goes before the Legislature in 1937 to ask for better physical examinations for automobile drivers and more "teeth" in the law to enforce regulations, it will have the aid of the medical profession. The Council recommended to the Committee on Public Policy and Legislation that every assistance be given the division in working out proper legislation.

\* \* \*

The principle behind the new program of physical examinations for all American Legion members was approved by the Council. A conference between the executive committee of the Committee on Public Health Education and Legion officials was suggested, however, with a view to placing before Legionnaires the scope and cost of an adequate examination.

### Study of Costs

A study of medical costs in Minnesota, covering the cost to the student and the state of a medical education, the cost to the practicing physician of overhead, equipment, transportation, expert assistance, the relation of physicians to population groups and

related problems was suggested and discussed.

A committee composed of President-elect A. W. Adson of Rochester, President W. W. Will of Bertha and E. A. Meyerding of St. Paul, to investigate possible sources of financial aid for such a study and also to report upon tentative plans at the next meeting was appointed by the Council.

## "Our Changing Times"

Important talks made before the delegates at the Sunday meeting are reported briefly here:

### Views of a Legislator

Said Dr. J. L. McLeod, state senator from Itasca county, member of the Interim Committee and chairman of the Reference Committee appointed by the Speaker to report upon the questions before the House of Delegates:

It is granted by all intelligent people, I believe, that we are going through economic changes which must alter considerably our relation to the general public.

The Social Security program involves a much larger number of people and many more activities than those involved in the administration of direct relief or work relief. The last legislature realized the fact but spent so much time wrangling over these problems that only the state set-up for old age pensions had been completed at the end of the session.

### To Simplify, Consolidate, Correlate

The Interim Committee was created by a concurrent resolution to study needs of the state with a view of qualifying for other federal grants and with a view, also, of "simplifying, consolidating and correlating the administration of said aids in such state and county agencies as may be determined to be most economical, efficient and advantageous to the state as a whole."

Our committee went into action in February. We have been meeting twice monthly ever since listening, for the most part, to interested people and agencies. Each of them put up its own case and we have acted as a sort of jury, weighing testimony and trying to pick the best plan from all the conflicting proposals made to us.

The difficulties ahead did not strike us until after we had had two meetings, made up our minds and forthwith announced that we were now ready to draft plans for a county welfare agency into law. The moment this news hit the press we were overwhelmed with criticism from every part of the state. At the third meeting we hastily reconsidered our action and we have simply listened since then, hoping eventually to arrive at some plan that will meet with more general favorable response from the state at large.

### Situation in Itasca County

The situation which confronts us is illustrated by Itasca county, which is my home and for which I have complete figures and details. The figures I am about to quote represent the entire year 1936 and are based upon actual experience in the first nine months of 1936.

Type of Aid	Estimated yearly total	Source of Funds		
		County	State	Federal
Direct Relief (Relief of).....	\$ 69,443.03	\$ 20,669.32	\$ 40,971.71	\$ 7,802.00
Poor and Hospital Relief.....	2,917.56	2,917.56		
Old Age Assistance Grants.....	113,585.80	18,930.96	37,861.94	56,792.90
Mother's Allowance.....	10,048.52	10,048.52		
Poor Farm.....	13,050.00	13,050.00		
County Hospital Care.....	12,792.60	12,792.60		
Sanatorium Care.....	11,867.40	11,867.40		
Transportation.....	1,645.60	1,645.60		
Deaf, Dumb and Blind.....	327.04	327.04		
Insane.....	3,090.52	3,090.52		
Epileptics.....	748.00	748.00		
Burials.....	4,136.00	4,136.00		
Care of Children (P. and H.).....	4,271.08	4,271.08		
Welfare Board Expense.....	211.52	211.52		
Outside Care (P. and H.).....	246.20	246.20		
Poor and Hospital—All Other.....	4,102.32	4,102.32		
Feeble-minded (P. and H.).....	1,944.48	1,944.48		
WPA Wages.....	287,000.00			287,000.00
CCC Allotments.....	35,175.00			35,175.00
Rural Resettlements (Includes Direct Grants Only—Not Loans).....	3,680.00			3,680.00
Forestry Projects.....	69,494.28			69,494.28
Bureau of Public Roads.....	68,845.00			68,845.00
Veterans' Relief.....	14,680.00		14,680.00	
Veterans' Compensation.....	205,752.00			205,752.00
Veterans' Hospital Care.....	10,035.00			10,035.00
Federal Surplus Commodities.....	19,800.00			19,800.00
National Youth Administration.....	8,400.00			8,400.00
Blind Pensions.....	2,880.00		2,880.00	
Judge of Probate—Dependency, Delinquency, Relief, Feeble-minded.....	12,590.00	12,590.00		
Totals.....	\$992,758.95	\$223,589.12	\$96,393.65	\$772,776.18
SUMMARY OF SOURCES OF FUNDS:				
Itasca County.....		\$123,589.12		12.44%
State.....		96,393.65		9.72%
Federal.....		772,776.18		77.84%
		\$992,758.95		100.00%



## Deeper and Deeper Water

As it now stands, in carrying out the investigations and other necessary functions for our public welfare, it is quite possible for no less than four different investigators from four different agencies to visit one relief family in Itasca county in the course of one day. You and I as taxpayers are quite likely to be financing these investigators to go anywhere from one to 50 miles to visit one family and do what might be done better by a single investigator.

We must prevent such overlapping and we must evolve a plan that will provide proper accounting for funds. Otherwise we are going to get into deeper and deeper water.

## "Up To Us"

Where do physicians come into this picture? Physicians must certainly make up their minds, now, just what they want to see established in the system to be evolved and go after it.

Medical aid is now fairly well established as a necessity of life. It is up to us to see that county boards and county commissioners assume financial responsibility for providing it.

## Doctors in Distress Counties

The problem for physicians is particularly acute in the so-called distress counties. In Aitkin county, for example, there is a population of 15,000 people of whom about 9,000 are receiving some type of government aid. What becomes of a medical practitioner in a county like that? It is in just such counties that county commissioners, faced with the probability of having to spend several thousands of dollars for medical aid, are quite likely to say: Let's hire our own physician and put him here; then we won't have to consider local physicians at all and we won't have any more trouble.

## Politics Enters In

The question of politics always enters in, of course. County officials jump up and tear their hair as soon as anyone suggests that somebody besides themselves should have a voice in the administration of welfare work in their counties. They lose sight entirely of the fact that the counties themselves, in most instances, provide only a small percentage of the money spent. They are sure they know as much about the medical and other needs of people on relief in their counties as anybody else could—and yet, as I have pointed out to them myself, they call in an engineer when they want to know how roads should be built. It is our job to show them that medicine, too, is a technical job and doctors must be consulted in the care of the sick.

## No Stones

In any case, I want to say to this group today: You will make a serious mistake if you sit back now and say: This is no worry of mine; it is up to you fellows on the Interim Committee. If you do, you

cannot reasonably throw stones at the committee next April or May after the legislation has all been drafted and run through the Legislature. Now is your opportunity to inform yourselves and make concrete suggestions as to what you want.

\* \* \*

Said Dr. R. G. Leland, Chicago, director of the Bureau of Medical Economics, American Medical Association:

The question before medicine today involves not only the immediate needs of the people but the future of medicine in the United States.

Something has happened to the people of this country recently that we all regret. There are many people who, today, are willing to accept all they can get for nothing but who, a generation ago would not have thought for a moment of accepting charity.

It is now recognized that medical care, like food, clothing, and shelter is one of the necessities of life: The problem is how to sort those who really need free care from those who do not; how to provide it efficiently and properly for the indigent and the marginal indigent.

Our position will be greatly strengthened, I believe, if we confine ourselves in our official actions solely to the medical aspects of these problems.

## Building a Machine

All schemes advanced for payment for medical services should be examined with the greatest care. I have examined scores of them myself and all of them, I find, carry with them some implication that control will emanate from the same source as the money. There is in all of them the possibility that they will result ultimately in the building up, as they have done in Europe, of a tremendous political machine. You know from the reports of your conferees in Minnesota the results of state-managed medicine in Europe.

We recognize, of course, the necessity for a properly conducted social service and economic investigation to establish the necessity for relief. But such services should not extend so far as to be transformed easily into a bureaucratic organization prying into the affairs of citizens and coming unwantingly between patient and physician.

We must keep in mind, in making any recommendations for administration of medical care certain fundamental principles.

## Professional Ethics

It is of first importance to reiterate at the outset, it seems to me, our adherence to the Principles of Medical Ethics established in substance some twenty-five centuries ago and still the basis for professional conduct today. We should devise some way of interpreting these principles to the public, and of showing that they are followed primarily for the benefit and protection of the public.

Secondly, the medical profession should not permit itself to be charged with the responsibility for determining indigency. Physicians are educated, licensed and accumulate experience to practice medicine only. It should be the responsibility of the regularly elected or appointed officials of a political subdivision to determine by one rule or another who is and who is not indigent. There should be no domination or control of the medical profession, on the other hand, in its determination of what shall be the nature and amount of medical care.

### Discipline by Confreres

Disputes over the amount and payment of bills or any grievances over the nature of services should be referred to a medical advisory committee appointed by the county medical society. There can be, of course, a very close liaison between counties and the state medical society. The latter should be the guiding body; but the conduct of physicians should be disciplined by their own confreres.

No compulsion should be exercised over patients to accept medical care from a particular physician. In other words, the potential freedom at least to choose his own physician should be guaranteed to the indigent as well as to those who can pay for medical care.

The medical profession is confronted with particular danger when it seeks to co-operate with state agencies by adopting a low fee schedule for indigent care. Fees thus reduced for any purpose are likely to freeze at that low point.

### Real Issue

We should remember, always, that the real issue in the midst of all these social changes, is that of providing people with a living wage. Most of the economic questions that confront us today would be solved automatically if there was enough money in the majority of pay envelopes to permit people to pay their own way.

### Co-Operative Trend

The organization of mutual benefit associations or co-operatives is one of the noticeable trends of the last few months, especially. These co-operatives flourish particularly among rural people and they might not be bad if their concern were only to provide a fund out of which to pay a physician. But they do not stop there. One of the fundamentals of the co-operative organization, as you know, is dividends to members and I just cannot conceive of dividends paid to members unless it is intended that medical service be purchased wholesale on the basis of a salaried physician and retailed to members on the basis of their monthly dues. I take it that physicians everywhere are opposed to the salaried practice of medicine.

### Occupational Medicine

Another popular movement of these times is worthy of discussion. This is the university and college health service movement which has grown so rapidly in the last few years. Industrial medicine has also spread in the same period. Now the question arises: Does the occupation of an individual create the need for a medical specialty? Must we have department store medicine, for example, and iron foundry medicine and office clerk medicine? If so, then I submit to you that the private practice of medicine must disappear altogether because, after all, everybody is either employed at something or he is unemployed; each time a man changed his employment under such a system he would be obliged to change his physician. It is my belief that the practice of medicine should be on a geographic, not an occupational or functional basis.

### Congress of Allied Professions

The social and economic trends of the times are drawing all professional men and women in the United States together to fight for a common cause; for protection of the public welfare and the freedom to practice their respective professions without the interference of bureaus and politicians.

A unique feature of the 84th Annual Meeting of the Minnesota State Medical Association to be held in the St. Paul Auditorium May 3, 4 and 5 is a Congress of Allied Professions.

This congress will bring together, at the invitation of the medical association, representatives of all of the professions that are allied in the delivery of medical care, nurses, dentists, druggists, hospital executives. Representatives of the bar association will be invited, too.

An all day conference is scheduled for Monday with a large evening meeting at the Auditorium theater as a climax.

Among the speakers are nationally known personages: Dr. Morris Fishbein, Father Alphonse J. Schwitalla of St. Louis, Dr. Maxwell J. Lick, Erie, Pennsylvania, president of the Pennsylvania State Medical Association.

### Notes From Chicago

At the Annual Conference of Secretaries: Minnesota's Basic Science Law was held up as a model and the decision of Minnesota's Supreme Court upholding and enforcing it was repeatedly quoted by Mr. J. W. Holloway, of the Bureau of Legal Medicine, American Medical Association. It is of interest to note that the basic science laws in the ten states where they

are now in effect have met with unanimous approval and support.

\* \* \*

Dr. J. H. J. Upham, president-elect of the American Medical Association, especially urged a great effort on the part of all secretaries to secure a larger percentage of fellows in their memberships. In some states not many more than half the members are fellows of the American Medical Association.

### For the General Practitioner

Surgeon General Thomas Parran of the United States Public Health Service and Miss Katherine F. Lenroot, Chief of the Children's Bureau of the Department of Labor, talked to the secretaries.

Both reflected a significant change of policy and attitude on the part of their respective departments of the government.

Apparently it is recognized by both that progress in public health and welfare cannot be achieved without the active and sympathetic coöperation of the general practitioner of medicine.

Said Dr. Parran: "*The administration has no immediate intention, at least, of taking any action looking toward the socialization of medicine.*"

It is evident, however, that the general practitioner must, in the interest of the public health and in his own interest, too, work closely with the public health officer. His best defense against socialization is to assume, himself, the duties of guardian of the public health,—duties which he has sometimes failed to assume in the past.

The present administration is apparently sympathetic toward the problems of the general practitioner, appears to have discovered him, in fact (it would be interesting to know just how and when).

There is no reason, however, why the practitioner should relinquish his independence or become subservient to government control.

Dr. Parran particularly emphasized the importance of a fresh effort to control syphilis, tuberculosis and pneumonia. He suggested that individual state medical societies assist in this effort, called attention to special committees appointed in several states already for this purpose.

### Veiled Threat

Miss Lenroot likewise asked for the coöperation of the general practitioner in the government program for maternal and child care to be financed by appropriations under the Social Security Act. This phase of the Social Security Act is reminiscent of the Sheppard-Towner Act—with this important difference: control of funds is now lodged with physicians and their coöperation is being sought.

There was, however, a veiled threat in Miss Lenroot's remarks. If organized medicine fails to take an active part in the program for maternal and child care, complete government control will follow.

### The Healer of Cos

(An Editorial Prepared by the Medico-Legal Advisory Committee)

The past twelve months have brought such changes in economic problems that sometimes one feels in a whirl of apprehension as to the future of the medical world.

Yet when one studies the past, one realizes that history but repeats itself. The situations that worry us today have their counterpart in the early world of Greece and Rome.

Hippocrates, when he studied the sociological trends of early medical practice, might have been thinking in the terms of our own day: his thoughts expressed in his writing are as true now as they were then.

Quoting two paragraphs from his Oath, we read:

"WITH PURITY and holiness I will pass my life and practice my art. I will not cut a person who is suffering with a stone, but will leave this to be done by practitioners of this work. Into whatever houses I enter I will go into them for the benefit of the sick and will abstain from every voluntary act of mischief and corruption; and further from the seduction of females or males, bond or free."

"WHATEVER, in connection with my professional practice, or not in connection with it, I may see or hear in the lives of men which ought not to be spoken abroad, I will not divulge, as reckoning that all such should be kept secret."

Do they not apply equally to our conduct today? We, too, maintain the sanctity of our calling, the operation only when necessary, the holding of proper consultation, the benefit of

the patient held uppermost at all times, the inviolability of the patient-physician confidential relations.

If each member of our Association will read the Hippocratic Oath before January 1 next and follow even partially the great truths contained in the writing of this sage, 1937 should be a happy and successful year for all. Many of the problems of your Medico-Legal Advisory Committee will be obliterated and we shall be united in a solid front against the inroads of outside interests seeking to break down medical customs which have lived through the centuries.

### Michigan Filter System

An interesting experiment in the sorting of the actually needy from those who might pay their doctor and hospital bills is under way in Michigan.

It is called the "Michigan Filter System" and it was developed by the Michigan State Medical Society with the assistance of the Michigan Hospital Association, the Michigan Association of Probate Judges, the augmented State Administrative Board, the Crippled Children Commission and the Auditor General's office.

The special object is to filter needy "afflicted children" and "crippled children" who are entitled by law to free medical care in Michigan from those who are not needy.

#### Two Boards

The system calls for two boards. One is a medical board, appointed by the county medical society, which examines each candidate for medical care to see if there is a medical need, if this need is urgent and what will be the probable period of hospitalization and treatment. The other is an economic filter composed of laymen and appointed by the Judge of Probate with the advice and counsel of the medical society's representatives. This board investigates and approves or rejects on economic grounds.

This system is modeled after a similar organization that has functioned in one Michigan county for some years for afflicted adults.

### Notice

**Physicians are NOT exempt from old age benefit assessments.**

It has come to the notice of authorities that many physicians have confused the retirement for unemployment insurance under the Social Security Act with the requirements for old age benefits.

All employers in the included employments—no matter how many they employ—must return the proper forms by December 5, 1936.

See your postmaster for forms SS-3 and SS-4. The deadline is December 5. After that there is a penalty.

It is now in operation in eighty-two counties in Michigan for beneficiaries of afflicted and crippled children's legislation and appears to have the endorsement and approval of state officials as well as the medical society. Adequate remuneration for their work is secured to the physicians who, in turn, assume full responsibility for needed care. As a result, a reduction of from 40 to 60 per cent has been made in appropriations for care of afflicted and crippled children.

#### Criticism

Certain bitter criticism of the plan has been voiced particularly by those who profess to be interested in sanatorium care for the tuberculous in Michigan.

According to these critics the filter is sifting too fine. Investigation has shown that these criticisms are not justified since care for the tuberculous is largely governed by laws that are not within the province of the filter boards to administer and the critics were probably not informed as to the groups that are subject to the filter.

The fact remains, of course, that any such filter system is likely to be a special target for criticism if it is sponsored or carried on under medical society management.



## West Coast Abortion Ring

An "abortion ring," so-called, was uncovered recently on the Pacific coast. The ring consisted of eleven persons, four of whom were licensed physicians and one a nurse. Among the laymen is a former enforcement officer of the California State Board of Medical Examiners. They operated in Washington, Oregon and California.

The physicians were convicted and sentenced to prison terms together with two of the laymen. The others, including the nurse, were allowed to apply for probation.

Minnesota is to be congratulated on the vigilance of its Board of Medical Examiners that has so effectively functioned to prevent such scandals in Minnesota.

## Minnesota State Board of Medical Examiners

### Negro Quack Pleads Guilty to Unlawful Practice of Healing

*Re: State of Minnesota vs. Samuel P. Shokunbi, alias Samuel Kojoe Pearse, unlicensed*

Samuel P. Shokunbi, alias Samuel Kojoe Pearse, a Negro forty-one years of age, entered a plea of guilty on October 8, 1936, to an information charging him with practicing healing without a Basic Science Certificate. Shokunbi entered his plea of guilty before the Honorable James C. Michael, Judge of the District Court at St. Paul.



Following an investigation made by the Minnesota State Board of Medical Examiners, a complaint was filed on July 22, 1936, charging the defendant with practicing healing without a Basic Science Certificate. Shokunbi had been operating from his home at 739 Rondo St., St. Paul. At the time of his arrest he stated that he was born at

Lagos, Nigeria, Africa. He stated that he came to the United States in 1922, and that he had studied osteopathy and naturopathy at the "Standard College" and the "National College in Chicago." He was specializing in the sale of Shokunbi's Herb Tonic, Shokunbi's Gall Stone Remover and Shokunbi's Female Regulator. The price varied from \$2.00 to \$5.00 per bottle. When Shokunbi was arraigned in court he demanded a preliminary hearing and one woman, who testified at the preliminary hearing, stated that "Dr." Shokunbi told her to "remove all her clothing" and then told her she had "kidney and female trouble." After being examined she was told that she could be cured for \$15.00 worth of Shokunbi's medicine. A book was found at the

defendant's place of business called the "Cottage Physician," describing hundreds of ailments and describing the medicine used in the treatment of these ailments. The testimony also showed that the defendant came to the homes of the various patients, and that he had obtained various sums of money from a considerable number of patients, all of whom were Negroes.

The defendant was arrested in May, 1927, at St. Louis, Missouri, on a suspicion of robbery, and in July, 1927, he was sentenced to four years at hard labor in the Federal Penitentiary at Leavenworth. This sentence was imposed in the United States District Court at St. Louis, for using the mails to defraud in connection with the sale of medicine. He served twenty-seven months of this sentence and was released. He was sentenced under the name of Samuel Kojoe Pearse. Shokunbi admitted that he has no license to practice any form of healing anywhere in the United States.

Following the submission of all the facts to the Court, Judge Michael sentenced Shokunbi to a term of sixty days in the St. Paul Work House and placed him on probation for one year under the supervision of the probation officer. Shokunbi was admonished by Judge Michael to "Get out of the patent medicine business and quit trying to be a doctor." Subsequent investigation by the Medical Board discloses that Shokunbi has removed the signs from his premises and that he is engaged in driving a truck at the present time.

### John F. Class Health Unit Ordered Closed in Minneapolis

Following an investigation by the State Board of Medical Examiners the John F. Class Vapo-Path unit at 2500 Colfax Avenue South, Minneapolis, was closed on November 4, 1936. The place was being operated by a (Mrs.) Hazel H. Aldridge and a Mr. E. R. Steadman. Mrs. Aldridge claims to be a registered nurse. The place was being operated under the "rules and regulations" of the John F. Class Co., Inc., Dayton, Ohio. Mrs. Aldridge stated that she and Carl A. Fjelstad, M.D., Minneapolis, entered into a contract with the Class company to purchase the unit for a sum in excess of \$3,000.00. She also stated that about \$1,000.00 was paid in cash and the balance to be paid \$50.00 per month. Dr. Fjelstad put in no cash but was to receive \$3.00 for the "examination" of each patient. Treatments cost \$3.00 for one, \$25.00 for ten and \$45.00 for twenty. Patients were placed in a cabinet and heated mineral fumes generated in the basement of the building entered the cabinet after which the patient was given a massage. The patient was also given a drink of mineral water before and after the treatment.

In 1931 the John F. Class Health System attempted to operate in St. Cloud by "leasing" their unit to persons not licensed to practice in Minnesota and this was also stopped by the Medical Board. At that time testimonials were put out over the name of the John F. Class Health System that it was good for colds, arthritis, asthma, kidney trouble, diabetes, tuberculosis and cancer.

Mrs. Aldridge and Mr. Steadman were advised by Mr. Peter S. Neilson, assistant county attorney assigned by Mr. Goff to assist the Medical Board in cleaning up quackery in Hennepin County, that a complaint would be issued unless the place was closed at once. Mr. Brist made the investigation for the Medical Board and represented them at the conference in Mr. Goff's office.

## REPORTS AND ANNOUNCEMENTS OF SOCIETIES

### Medical Broadcast for December

The Minnesota State Medical Association Morning Health Service.

The Minnesota State Medical Association broadcasts weekly at 1:45 o'clock every Wednesday morning over Station WCCO, Minneapolis and Saint Paul (810 kilocycles or 370.2 meters).

*Speaker:* William A. O'Brien, M.D., Associate Professor of Pathology and Preventive Medicine, Medical School, University of Minnesota.

The program for the month will be as follows:

- December 2—Marking Babies
- December 9—The Use of Cosmetics
- December 16—Weight Control
- December 23—The Winning Fight
- December 30—Your Teeth—A New Year Resolution.

### American Association for the Study of Goiter

The American Association for the Study of Goiter again offers the Van Meter Prize Award of \$300 and two honorable mentions for the best essays submitted concerning experimental and clinical investigations relative to the thyroid gland. The award will be made at the next annual meeting scheduled for Detroit in June.

Manuscripts, not to exceed 3,000 words, should be sent to Dr. W. Blair Mosser, 133 Biddle Street, Kane, Pennsylvania, not later than April 1, 1937.

### Minnesota Public Health Association

Dr. Charles H. Mayo of Rochester, retiring active president of the Minnesota Public Health Association, was named honorary life president of the organization at its annual dinner held at the Nicollet Hotel, Minneapolis, November 13.

Dr. Mayo served as toastmaster at the dinner, at which the principal speakers were: Dr. Horton Casparis, Nashville, Tennessee, professor of pediatrics at Vanderbilt University Medical School and President of the Tennessee Tuberculosis Association; Dr. Caroline Hedger, staff member of the Elizabeth McCormick Memorial Fund, Chicago, Illinois; and Miss Frances Brophy, New York City, field adviser of the National Tuberculosis Association.

A feature of the program was the presentation by Dr. Mayo of a distinguished service pin to Miss Theresa Ericksen, veteran war nurse and pioneer public health nurse, for her pioneer work for the Christmas Seal.

Representatives of forty coöperating agencies, county public health association officers, local Christmas Seal managers, physicians and nurses attended the dinner, which marked the thirtieth anniversary of the introduc-

tion of the Christmas Seal into America as an agent to combat tuberculosis.

Preceding the dinner, an all-day session was held in St. Paul opening with a Christmas Seal Institute in the morning, followed by a luncheon with business sessions in the afternoon. Officers elected are: Dr. O. J. Hagen, Moorhead, president; Dr. Lewis S. Jordan, Granite Falls, first vice president; Mrs. A. L. Sperry, Owatonna, second vice president; Mrs. G. R. Day, Farmington, secretary; A. M. Calvin, Saint Paul, treasurer, and Dr. E. A. Meyerding, Saint Paul, executive secretary.

### John W. Bell Tuberculosis Lecture

Dr. H. E. Kleinschmidt, Medical Director of the National Tuberculosis Association and recognized as one of the outstanding authorities on the fight against this disease, will deliver the third annual John W. Bell Tuberculosis Lecture before members of the Hennepin County Medical Society, Monday, December 7, at 7:45 p. m.

Dr. Kleinschmidt will be the third speaker of national reputation brought before the society by this lectureship. The lectureship was founded as a memorial to the late Dr. John W. Bell and each year serves as a tribute to him and to one other outstanding physician.

This year the lecture will also honor Dr. Frederick A. Erb, who died October 25 while President of the Hennepin County Tuberculosis Association. Dr. Erb, who was born and educated in Minneapolis, had practiced medicine in this city for thirty-four years. His active service in the Hennepin County Medical Society and the Hennepin County Tuberculosis Association, as well as his many public spirited activities in behalf of his community, made him one of the most respected and beloved members of his profession in the city.

The first Bell lecture, given in 1934, was delivered by Dr. Gerald E. Well of Colorado Springs on the subject "Pulmonary Tuberculosis Problems for the Practitioner." The second lecture a year ago was given by Dr. F. M. Pottenger of Monrovia, California, on "The Responsibility of the General Practitioner in the Prevention and Cure of Tuberculosis." Dr. Kleinschmidt's subject this year will be "The Doctor and Tuberculosis of the Future."

Dr. Kleinschmidt, a graduate of Washington University, has had a wide experience both in the active practice of medicine and in the public health service. Dr. Kleinschmidt started his medical career in St. Louis. Since 1927 he has been Medical Director of the National Tuberculosis Association. In that capacity of Medical Advisor to the 2,000 Tuberculosis Associations in the United States, he has been closely associated with all progress in tuberculosis work. He is therefore exceptionally well qualified to bring to the Hennepin County Medical Society the latest developments in tuberculosis control here and abroad.

## REPORTS AND ANNOUNCEMENTS OF SOCIETIES

### Blue Earth Valley Society

The annual meeting of the Blue Earth Valley Medical Society was held at Blue Earth, November 12. The following officers were elected: President, Dr. J. Folta, Ceylon; vice-president, Dr. E. A. Thayer, Truman; secretary, Dr. W. C. Chambers, Blue Earth; delegate, Dr. R. C. Hunt, Fairmont; censors, Dr. S. W. Syblrud, Bricelyn, and Dr. W. H. Rowe, Fairmont. Case reports were given by Dr. H. Boysen and Dr. H. L. Bailey and a general discussion followed.

### East Central Minnesota Society

The East Central Minnesota Medical Society met at the Colony for Epileptics at Cambridge, Minnesota, on November 20, 1936. The following officers were elected for the coming year: Dr. A. K. Stratte of Pine City, president; Dr. A. A. Peterson, Mora, vice president; Dr. H. C. Cooney, Princeton, delegate; Dr. A. K. Stratte, alternate; Dr. C. M. Ness, Cambridge, secretary and treasurer. Dinner was served at the institution. A scientific program was presented in the evening by guest speakers. Dr. E. A. Regnier discussed "Fractures" and Dr. C. J. Ehrenberg gave an address on "The Third Stage of Labor."

### Mower County Society

The annual meeting of the Mower County Medical Society was held at the Austin Hotel, Austin, November 19, 1936, with Dr. J. K. McKenna as presiding officer.

The society endorsed the Austin Milk Fund project and appointed Dr. U. S. Anderson as a committee of one to represent the society in its relations with the Milk Fund board.

Officers elected were: President, Paul C. Leck, Austin; vice-president, R. S. Hegge, Austin; secretary, P. A. Robertson, Austin; treasurer, A. E. Henslin, LeRoy.

### Red River Valley Society

The fall meeting of the Red River Valley Medical Society was held Tuesday evening, October 6, at 6:30 p. m. in the Evelyn Hotel at Thief River Falls, Minnesota. A dinner for the members and the Women's Auxiliary preceded the program. The scientific program was as follows:

Injection Treatment of Hernia—Dr. A. M. Smith, Thief River Falls, Minn.

Discussion of Case Reports of Streptococci.

Meningitis of Otitic Origin—Dr. C. L. Oppegaard, Crookston, Minnesota.

Individual case reports were presented by Drs. O. F. Melby, L. G. Culver, and C. W. Froats, all of Thief River Falls.

### Renville County Society

The annual meeting of the Renville County Medical Society was held at Sacred Heart, on November 12.

Dr. L. Strassmann of Berlin, Germany, gave a very interesting talk on "State Medicine as Practiced in Germany."

Dr. W. F. Braasch of Rochester spoke on "Modern Treatment of Infections in the Urinary Tract."

Mr. F. Manley Brist of St. Paul discussed legal and legislative problems of interest to the medical profession.

The following officers were elected for the coming year: President, Dr. R. C. Adams, Bird Island, vice president, Dr. J. Dordal, Sacred Heart; secretary-treasurer, Dr. R. S. Madland, Fairfax; censor, Dr. E. H. Loenholdt, Hector; delegate, Dr. W. A. Brand, Redwood Falls, alternate, Dr. A. A. Passer, Olivia.

### Rice County Society

The second annual dinner of the Rice County Medical Society and Auxiliary was an event of Thursday evening, November 12, at the Faribault Hotel.

The special guests were Dr. and Mrs. R. L. Wilder of Minneapolis and Dr. C. E. Ward of Rochester, Minn. Dr. O. P. Thorson, of Northfield, presided as toastmaster.

The two main talks of the evening were given by Dr. Wilder, who spoke on "Prevention of Contagious Diseases in Children" and Dr. Ward, of the Mayo Clinic, on "Preserving Child Health with Special Emphasis on Hygiene, Nutrition, and Habits."

Short talks were made by Mrs. M. L. Mayland and Mrs. A. M. Hanson in behalf of the Auxiliary.

### Southwestern Minnesota Society

The annual meeting of the Southwestern Minnesota Medical Society was held at Worthington, November 18. The following officers were elected: President, E. A. Kilbride, Worthington; vice-president, C. L. Sherman, Luverne; secretary-treasurer, H. DeBoer, Edgerton; delegates, E. A. Kilbride, Worthington, and S. A. Slater, Worthington.

Speakers were Horace Newhart, Minneapolis, and Dr. B. J. Branton of Willmar, who discussed legal questions involved in the practice of medicine.

### Washington County Society

The Washington County Medical Society was addressed on October 13 by Dr. Howard K. Gray of the Mayo Clinic. His subject was "Surgery of the Gallbladder and its Terminal Effects" and the address was illustrated.

The Society was given an illustrated address on November 10 by Dr. W. A. Fansler of Minneapolis on the subject of "Rectal Pathology," special reference being given to surgical and non-surgical treatment of hemorrhoids. The scientific program was followed by a discussion of economics.

## PROCEEDINGS of the MINNESOTA ACADEMY OF MEDICINE

Meeting of October 7, 1936

The regular monthly meeting of the Minnesota Academy of Medicine was held at the Town and Country Club on Wednesday evening, October 7, 1936. The meeting was called to order at 8 o'clock by the president, Dr. Thomas S. Roberts.

There were fifty-two members and one guest present.

Minutes of the May meeting were read and approved.

The scientific program consisted of two papers.

### CHORDOMA

ARNOLD SCHWYZER, M.D.

*Saint Paul*

Dr. Schwyzer read a paper on the above subject, reported a case, and showed lantern slides. (To appear in *MINNESOTA MEDICINE*, January, 1937.)

### Discussion

DR. J. F. CORBETT (Minneapolis): I greatly enjoyed listening to this very complete discussion. I personally have had but one case of chordoma and that was just the opposite of Dr. Schwyzer's case. At the time I saw this patient, there was a large tumor involving the second and third and several other cranial nerves. It was on the front of the sphenoid. The remarkable thing about it was that it could not be removed because of its size. A decompression gave relief for a long period of time. The tumor was slow in growth undoubtedly, although it was cellular, which would indicate there was some malignancy.

DR. ROBERT EARL (St. Paul), in discussion of Dr. Schwyzer's paper, reported the following cases of chordoma.

The patient, Miss L., aged forty-six, unmarried, first consulted me on April 6, 1936. Her family and personal history were negative.

All of her laboratory findings were negative except for a moderate secondary anemia. She had never been sick until August 15, 1935, when she developed a severe bearing down pain in the rectum which was more or less constant for two weeks. She consulted a physician, who told her she had a hemorrhage in the rectum. The patient had never seen any blood in the stool. Hot sitz baths relieved her discomfort temporarily. The pains and discomfort improved some, so she taught school until April 3, 1936. On February 2, 1936, she was examined by another physician, who diagnosed tumor of the uterus and advised operation. When I saw her on April 3, 1936, her appetite and digestion were normal. With the aid of mineral oil, she had one slender formed stool a day. No blood or mucus were seen in the stools. Her periods had been irregular the past few months. Her general physical examination was negative.

Pelvic examination disclosed a tumor in front of the sacrum and left side of the pelvis extending down to the sphincter ani. The vagina and rectum were

pushed to the right anterior part of the pelvis. The cervix could not be reached. Some irregular masses could be palpated on the lower abdomen just above the pubis.

On April 9, 1936, I explored through a midline suprapubic incision. I found the uterus, tubes and ovaries essentially normal but pushed up into the abdomen and resting on top of a tense mass which filled the entire pelvis. On opening into this mass, I found a broken-down degenerated mass containing some brown cystic fluid and masses of broken-down tissue filling the entire pelvis. I removed as much as possible of the degenerated mass and swabbed the cavity with formalin solution. I packed the cavity with gauze, one end of which was brought through an opening made in the vault of the vagina through which it was removed two days later.

The tubes and ovaries were removed. The uterus was not removed but was retroverted and sutured over the peritoneal line of incision to reinforce it and protect the peritoneal cavity.

Although the patient was given four postoperative courses of deep x-ray therapy, the growth is recurring.

The microscopic section shows one of the typical forms of chordoma of the more malignant type. On the lantern slide, one can see the similarity to parts of the section from Dr. Schwyzer's case.

DR. R. G. ALLISON (Minneapolis): Several months ago we had a young man sent in to us for x-ray examination who had sustained a rather trivial injury to his back. The injury was more on the order of a strain. We found a clean-cut line of cleavage, showing only in the lateral plate, bisecting the body of one of the lumbar vertebrae. Subsequent plates have shown no change in this line of cleavage. The consultants who have seen this have diagnosed it as a remnant of the notochord. This is the first such case I have seen and I have seen none mentioned in the literature. I wonder if Dr. Schwyzer could tell us if he has seen any such findings shown by x-ray examination.

DR. ARNOLD SCHWYZER (in closing): I am sorry I cannot answer Dr. Allison's questions because I have not any sufficient experience in these cases as to the x-ray findings.

The two cases reported by Dr. Corbett and Dr. Earl just show how these cases vary in malignancy. The case reported by Dr. Corbett is that of a slow insidious growth. In that case, decompression would do good for a while; whereas, in the very malignant case Dr. Earl reported, I do not think there is much to be done unless one could get such a case at a very early date.

As for the diagnosis—I made that diagnosis myself when I began to think about the case; and, on examining the sections carefully, it was plain that we had a chordoma. The location of these tumors is of great importance for the diagnosis. Ewing said the location



is more important than the microscopic appearance. The microscopic picture may vary very much. Thus, the combination of the topography together with the microscopic findings is important for the diagnosis.

## SEVERE CUTANEOUS REACTIONS TO THE BARBITURATES

S. E. SWEITZER, M.D., and CARL W. LAYMON, M.D.  
Minneapolis

### Summary

1. Attention is called to the possible dangers attendant with the administration of the barbiturates.
2. Four cases (three of which were fatal) of severe cutaneous reactions to these drugs were reported.
3. The theoretical consideration of drug eruptions with reference to the mechanism of sensitivity, the localization of the shock tissue and the types of eruptions were briefly presented.
4. The resemblance of drug allergy to serum disease and of certain eczematous drug eruptions to dermatitis of external origin makes it probable that the differences between these three types of allergy (drug allergy, serum disease and contact dermatitis) are not great.
5. It is believed that the site and type of hypersensitive tissue which an excitant (drug, serum or external agent) reaches is the chief factor in the type of response to that excitant, rather than the mechanism of sensitization or the route by which the excitant reaches the tissue.

### Discussion

DR. E. L. GARDNER (Minneapolis): I am particularly interested in this paper because, in functional gastrointestinal disturbances, phenobarbital in  $\frac{1}{4}$  grain (or less) doses is used over long periods of time. Personally, I have never seen any reaction when prescribed in these small doses. Skin reactions, usually occurring early, may occur after taking 1.5 to 5 grains in twenty-four hours, but these chronic cases taking the small doses, even for many months, do not show skin reactions or depression of the leukocyte count. Possibly the repeated small doses desensitize the patients to the drug. I wonder if Dr. Sweitzer has ever seen any reactions when the dose has been not over  $\frac{1}{4}$  grain in any twenty-four hours? The cases Dr. Sweitzer reported were very ill from other diseases and this general debility may have been the most important factor.

I think this is a very important contribution. Many of the supposedly "harmless" drugs may sometimes produce serious results—mineral oil sprays in the nose may produce a very serious type of chronic pneumonia and the long-continued use of magnesium may produce serious calcium depletion.

DR. FRANKLIN WRIGHT (Minneapolis): About thirty-five years ago, when I studied dermatology, about 400 different drugs had been reported as producing eruptions on the skin. In the last few years our American pharmacists have outdone themselves in supply-

ing good drugs. I have had no experience with barbital skin eruptions, but had an experience with barbital which I would like to report. I did a prostatectomy, and, in four days, the patient was sitting up in bed. His physician came in on the fifth day and ordered albagene (a barbital compound) 5-grain tablets, one tablet at 4 p. m., one at 7 p. m. and one at 11 p. m. At three o'clock the next morning the hospital called me. I found the patient with a pulse of 150 and I thought he would not live until daylight. I ordered hypodermoclysis and filled him with strychnine and he gradually got better. Now, at the end of six weeks, he is still in a wheel chair, making a very slow recovery.

I believe that his collapse was due to barbital contained in the albagene.

DR. R. T. LAVAKE (Minneapolis): I agree with Dr. Gardner that this is a very important subject. I suppose few use the barbiturates more than the obstetrician. We have used pentobarbital in practically every labor since it came upon the market. In this period we have seen only three or four cases of mild dermatitis due to its use. It seems to me that the crux of the matter lies in warning against the continuance of the drug at the first untoward sign. To my mind, we should not deprive patients of the benefits of the barbiturates through the exaggeration of their danger.

I agree thoroughly with Dr. Roberts, that the indiscriminate sale of these drugs without prescription should not be allowed.

If I am not mistaken, three of the four fatal cases reported in this paper were found to have a bronchopneumonia at autopsy. It would suggest itself to me that these cases might be interpreted as very sick people who happened to receive barbiturates. I would like to ask if it was supposed that the bronchopneumonia was a result of the barbiturates?

DR. C. B. WRIGHT (Minneapolis): I would like to ask Dr. Sweitzer whether any of these patients showed any other evidence of allergy, or whether in the literature there is any indication that these people are allergic to other drugs. In allergies, the dosage is not so important as the degree of allergic tendency of the individual.

DR. PAUL O'LEARY (Rochester): There are two points I should like to discuss in regard to eruptions from the barbituric acid derivatives. The first is the so-called delayed reaction, in which the eruption may not appear until three to five days after the drug has been stopped. The cutaneous picture of this type of eruption is similar to that described by Dr. Sweitzer. I was surprised to hear the comments of the previous discussors on the rarity of eruptions from the barbiturates, because, in dermatological practice, during the past five or six years, these manifestations of intolerance to the drug have been quite common. Perhaps the recent efforts of the manufacturers to produce remedies that are apparently less toxic than the original preparations account for the scarcity of these reactions now in general practice and surgical work.

The second point which I wish to bring out is

illustrated by the recent work of Wise and Wile and their co-workers, who endeavored to study the role of allergy in the production of these lesions. Both of these investigators excised a plaque of dermatitis which had developed following the ingestion of a barbiturate and made a full thickness graft of this plaque on an area where the eruption had previously not appeared. The excised normal skin was grafted over the area where the dermatitis developed and from which the plaque had been excised. On administering a barbiturate within a week after the graft, the eruption reappeared in the patch of dermatitis that was transplanted. However, if several months were allowed to elapse, the grafted area soon lost its sensitivity; likewise, the normal skin which had been transplanted to the area of dermatitis did not develop the dermatitis, although the dermatitis tended to develop in other areas. It would appear, therefore, that the sensitivity is not a localized affair in the sense of a localized area, but is rather of a systemic nature.

DR. C. B. DRAKE (St. Paul): I have run across skin reactions following the use of luminal in just two instances. One was in an elderly patient at the City Hospital who, following the taking of about 1.5 grain of luminal for several nights, developed a severe dermatitis with extensive petechial hemorrhages. He recovered and later, through an error, was given luminal again and went through the same process. The other instance was in a private patient who developed a macular eruption from one small dose of luminal.

In this connection, I wish to report what was apparently an unusual experience I had last winter, from the use of quinidine. An elderly woman was given 2 grains of quinidine after dinner one night because of extrasystoles. In the early morning hours she awoke with severe burning in her skin, and, when I saw her, she had a generalized erythema, and later even petechial hemorrhages in both legs. General desquamation followed involving the palms and soles. Inasmuch as she had had a small dose of luminal, the two preceding nights, I was unconvinced that the quinidine was the cause of the dermatitis. Two weeks later 1 grain quinidine produced the same symptoms, although in milder form. I assured myself that the druggist had made no mistake in the prescription and had a laboratory confirm the identity of the drug. This patient had taken quinine as a young woman without any untoward effect. She had, however, suffered from a severe dermatitis some years ago, following the use of hair tonic which, I imagine, may have contained some quinine. An interesting aftermath of her recent experience was the appearance of irregular ridges across the nails of fingers and toes, which was, doubtless, the result of the effect of the cutaneous reaction on the matrix of the nails. This, evidently, is a very unusual instance of sensitiveness to quinidine as the drug is used so extensively and the skin specialists I have questioned have none of them had a similar experience.

DR. R. D. MUSSEY (Rochester): I just want to add a word to Dr. LaVake's discussion. We have been

using these drugs for analgesia in confinement cases since 1929 and I think Dr. O'Leary will bear me out that his group has not been called at any time on account of an eruption due to the barbiturates.

I think Dr. Sweitzer's paper is very timely and that one should use the barbiturates with care, but I do not think we ought to throw this medication aside because of an occasional case of this sort. I am sure the average patient in labor can take this medication without any appreciable number of them developing drug eruption.

DR. H. E. MICHELSON (Minneapolis): I am heartily in accord with the gentlemen who have suggested that the sale of barbiturics should be definitely controlled by law. The change of psyche due to the long-continued use of these drugs is much more serious than the rare cutaneous involvement that Dr. Sweitzer has reported. When an eruption does occur, the external treatment is essentially that of any dermatitis and internally the use of alkalis.

DR. THOMAS S. ROBERTS (Minneapolis): In its broader application, this is a subject of much more than passing interest. While the cutaneous reactions following the administration of the barbiturates to persons with allergic sensibilities, especially those in impaired health, may be serious or even fatal, as described by Dr. Sweitzer, the subject of the general use of these drugs is of much wider and more vital importance. Thousands and thousands of people, with or without the advice of physicians, are taking regularly one or another of the various barbiturate preparations, frequently with deleterious effects and not uncommonly with disastrous results. In this, and in most states, these drugs are sold over the drugstore counter without restriction and conscientious druggists are worried and appalled at the extent to which the evil has grown. Barbiturates are all habit-forming and their consumption has become almost a national evil.

The regular taking of even small doses of the barbiturates and their special administration in large doses produces, in addition to the sedative effect, a suspension of the coördination of both the mind and body. The extent of these effects varies, of course, with the susceptibility of the individual, but it not infrequently results in chronic cases in the disorganization of the mental faculties and a muscular incoördination suggestive of locomotor ataxia. In the more common cases the mind is confused, the speech thickened, and muscular movements in general, are disordered and clumsy—much like an intoxicated person. The normal personality is lost. The mental condition may even simulate insanity with homicidal or suicidal intent. One individual that came under my notice was committed to an asylum after attempting to shoot his wife, but made a speedy recovery after the withdrawal of the drug—much to the surprise of the attendants, who were not aware of the cause. Another patient, after taking 10 grains of veronal three times daily for a short period, escaped and ran amuck armed with a brick with which he threatened all who interfered.

## WOMAN'S AUXILIARY

Mrs. E. M. Hammes, President,  
1456 Summit Avenue, Saint Paul

Mrs. A. A. Passer, Editor, Press and Publicity, Olivia

THE first meeting of the new board of the Woman's Auxiliary to the Minnesota State Medical Association was held on Wednesday, October 14, 1936, at the home of Mrs. E. M. Hammes, state president, at Saint Paul, thirty members being present. The budget was discussed and approved, and reports of committee chairmen were approved.

Dr. W. W. Will, president of the Minnesota State Medical Association, and Dr. E. A. Meyerding, executive secretary, reviewed the social and economic problems of the day as they affect the practice of medicine.

The Auxiliary will again cooperate with the Minnesota Public Health Association in sponsoring the annual high school radio contest held in connection with the 1936 Christmas Seal educational campaign.

The members of the Woman's Auxiliary extend to Mrs. F. A. Erb, state recording secretary, deepest sympathy in the loss of her husband who passed away at the family home in Minneapolis, October 18.

### St. Louis County Auxiliary

Mrs. E. M. Hammes, president of the state Woman's Auxiliary, was a guest speaker at the membership tea which the members of the St. Louis County Auxiliary gave in September, at the home of Mrs. Le Roy E. Doolittle in Duluth. Mrs. Thomas O. Young and Mrs. L. R. Gowan were co-chairmen for the event assisted by Mrs. C. O. Kohlbray, Mrs. William Strobel, Mrs. L. L. Merriman and Mrs. W. E. Hatch. Mrs. W. C. Martin was in charge of the entertainment.

Members of the St. Louis County Auxiliary were entertained at the Fay Hotel in Virginia at a one o'clock luncheon by the Virginia group. A social hour followed the meeting, which opens activities of the groups for the year. Mrs. Robert S. Forbes is president of the Auxiliary; Mrs. W. N. Graves, first vice president; Mrs. Harry Klein, second vice president; Mrs. Elmer J. West, recording secretary; Mrs. C. W. Taylor, corresponding secretary; Mrs. P. S. Rudie, treasurer, and Mrs. A. E. Walker, historian.

### Wright County Auxiliary

Mrs. E. M. Hammes and daughter, Miss Maud Hammes, were guests of the Wright County Auxiliary at a meeting held at the home of Mrs. J. J. Catlin, in Buffalo, on Tuesday, October 20. A joint banquet, with the members of the Wright County Medical Society, followed the afternoon session.

### Renville County Auxiliary

The members of the Renville County Auxiliary were entertained at the home of Mrs. J. J. Dordal of Sacred Heart, on Thursday, November 12.

returned to normal after suspension of the drug. A business man of large interests lost the ability to dictate a letter, to look after his affairs, became almost helpless physically, had retention of urine so that the use of a catheter became necessary, but recovered slowly, after the daily doses of veronal were discontinued. Cases of this kind could be multiplied many times from my own experience, but it would take too much time to recount them here. Suffice it to say, that they have led me to feel and to believe that the profession is handling (in the case of barbiturates) drugs that are so potent and so habit-forming that they should be used with very especial care and caution. As soon as possible, a law should be passed prohibiting the indiscriminate dispensing of these drugs in this state, as has already been done elsewhere.

Dr. C. B. Wright: It may interest Dr. Roberts to know that several states have already passed laws restricting the sale of barbiturates and that such a law is contemplated in Minnesota, if the druggists and pharmacists will cooperate.

Dr. Switzer (in closing): In answer to Dr. Gardner's question, we have not seen reactions when the dose of barbiturate has not been over  $\frac{3}{4}$  grain in any twenty-four hours. In most of our cases, however, the exact dose was not determined, since the drug was administered by physicians other than ourselves. Our patients, however, were not seriously ill from other diseases except the one who developed granulocytopenia.

In reply to Dr. LaVake, we felt that the bronchopneumonia, which was found at autopsy, represented a terminal complication, since no signs of pneumonia were found on the first examination.

As to the question of Dr. C. B. Wright, patients with drug allergy usually give no history of other personal or familial allergy.

Our purpose in presenting this paper was to call attention to the potential dangers of the barbiturates, rather than to decry their proper use by physicians who are alert to these dangers.

The meeting adjourned.

R. T. LAVAKE, M. D.  
Secretary

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## BOOK REVIEWS

The president, Mrs. R. C. Adams of Bird Island, presided at the business session, which was followed by a joint banquet with the members of Renville County and Camp Release Medical Societies.

### Hennepin County Auxiliary

Mrs. Stephen H. Baxter and Mrs. Chester Stewart presided at the tea table at the tea given Friday afternoon, November 6, in the Medical Arts Library, following a talk by Mrs. Arthur A. Law, whose husband, the late Dr. Law, was a leading member of the Hennepin County Medical Society. Her subject was "People and Places in South America," and she illustrated it with slides. Guests were wives of visiting doctors in Minneapolis for homecoming at the University of Minnesota.

## BOOK REVIEWS

**NUTRITIVE AND THERAPEUTIC VALUES OF THE BANANA.** A Digest of Scientific Literature. 143 pages. Paper cover. Boston: United Fruit Co., 1936.

**APPLIED DIETETICS.** Sanford Blum, A.B., M.S., M.D. Head of Department of Pediatrics and Director of Research Laboratory, San Francisco Polyclinic and Post Graduate School. 408 pages. Price, \$4.75, cloth. Philadelphia: F. A. Davis Co., 1936.

**ALLERGIC DISEASES, THEIR DIAGNOSIS AND TREATMENT.** Ray M. Balyeat, M.A., M.D., F.A.C.P. Associate Professor of Medicine and Lecturer on Diseases Due to Allergy, University of Oklahoma Medical School, etc. 516 pages. Illus. Price, \$6.00, cloth. Philadelphia: F. A. Davis Co., 1936.

**KEEPING YOUR CHILD NORMAL.** Bernard Sachs, M.D. Former President New York Academy of Medi-

cine, etc. 148 pages. Price, \$1.50, cloth. New York: Paul B. Hoeber, 1936.

**THE PRACTICE OF MEDICINE.** Jonathan Campbell McKim, M.D., LL.D. Professor of Medicine and Director of Department of Medicine, McGill University, etc. 1343 pages. Illus. Cloth binding. St. Louis: C. V. Mosby Co., 1936.

**MODERN TREATMENT AND FORMULARY.** Edward A. Mullen, P.D., M.D., F.A.C.S. Assistant Professor Pharmacology and Physiology, Philadelphia College of Pharmacy and Science, etc. 707 pages. Price, \$5.00, flexible cover. Philadelphia: F. A. Davis Co., 1936.

**1936 YEAR BOOK OF GENERAL MEDICINE.** Edited by George F. Dick, M.D., Lawrason Brown, M.D., George R. Minot, M.D., S.D., F.R.C.P., William B. Castle, M.D., A.M., M.D., William D. Stroud, M.D., and George B. Eusterman, M.D. 848 pages. Illus. Price, \$3.00, cloth. Chicago: Year Book Publishers, 1936.

**FUNDAMENTALS OF HUMAN PHYSIOLOGY.** J. J. R. Macleod, M.B., D.Sc., F.R.S., Late Regius Prof. of Physiology in University of Aberdeen, Scotland, and R. J. Seymour. 424 pp. Illus. Price, \$2.50. St. Louis: C. V. Mosby Co., 1936.

An excellent summary of the non-controversial present-day knowledge of physiology, written in such a manner as to be useful to the average physician for purposes of hurried review, and to be understandable for the intelligent student or layman who is willing to use the dictionary occasionally and is not frightened by technical names. If nurses and the lay public could be taught the contents of this book, the death knell of quackery and fallacious home treatment would be sounded.

R. E. CUTTS, M.D.

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